Transport Statement

Trade City, Sharston



SWECO

Change list

Ver	Date	Description of the change	Reviewed	Approved by
01	06/08/25	Final for Issue	IB	NJR
02	07/08/25	Final Reviewed	IB	NJR

Sweco UK Limited Reg. No. 2888385
Project Name Sharston Road Trade City
Project Number 65215652
Client Kier Sharston Limited
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Date 2025 08 07
Document reference 65215652-SWE-XX-XX-R-TR-0002-P02

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1 Introduction

1.1 Background

This Transport Statement (TS) has been prepared by Sweco, on behalf of Kier Sharston Limited (the 'Applicant'), to support an application for full planning permission for the proposed redevelopment of the former Electrium Sales Ltd Site, 1934 Sharston Road, Wythenshawe (the Site). A Stage 1 Road Safety Audit (RSA1) has been undertaken and is included as an Appendix to this report. From a transport planning perspective, the supporting documentation also includes an Interim Travel Plan (ITP) which is provided under separate cover.

The development proposal comprises the demolition of the existing buildings (12,390m^2 GIA) and reprovision of, 8,511m^2 GIA of industrial and logistics land uses (Classes B2 / B8) including ancillary offices and trade counters, with all associated works including landscaping, car parking and alteration to the existing site access arrangements from Sharston Road and Harper Road. A Prior Approval application for demolition works has already been submitted and approved by Manchester City Council (MCC) and therefore matters relating to demolition are not considered further in this TS.

The purpose of this TS is to set out the details of the scheme from a traffic and transport planning perspective. It presents the proposed access strategy and considers the sustainable transport characteristics of the development and the surrounding highway network. It also identifies the changes in traffic generation as a result of the Site redevelopment and confirms the suitability of the existing highway infrastructure to accommodate the level of anticipated trips made by sustainable modes.

1.2 Scoping

The TS has been prepared in line with best practice and professional judgement based on experience of supporting similar development proposals. The scope of the TS and the associated ITP have been discussed with MCC at an initial pre-application meeting held on 29th April 2025 and refined via subsequent dialogue and comments received from MCC, included as **Appendix A**.

Although demolition of the existing buildings has been sought as part of these proposals, the existing buildings can be lawfully reoccupied for B2/ B8 uses with the larger development quantum without requirement for further planning consent. It was confirmed by MCC that a TS would be sufficient to support the proposals in transport terms.

The key aspects of the agreed scope of this assessment are as follows with the

- The TS shall include a study of the background highway conditions in the vicinity of the Site, including its accessibility by non-car modes, and a review of personal injury accidents over the latest available full 5 year period.
- Details of the proposed development should be set out, including: the access proposals and servicing strategy. The proposed parking provision should be justified in the context of prevailing policy guidance and operational requirements, including, consideration for Electric Vehicle charging, disabled parking, motorcycles and cyclists.
- A multi-modal trip generation assessment is required based on the worst-case B2/B8 development scenario.
- A net trip generation assessment comparing the extant and proposed development is required to demonstrate the impacts of the proposals on the local highway network.

It was noted at the pre-application meeting that MCC would consult with TfGM in relation to the slight relocation of the existing bus stop adjacent to the amended Site access on Sharston Road. At the time of writing, TfGM has not provided any comment and the scheme design has therefore been progressed on best design principles.

In addition to the scope agreed with MCC, this TS has been prepared in accordance with BREEAM guidance. As such it includes a review of amenities within a 500m walking distance from the Site and a calculation of the public transport Accessibility Index. The ITP which has been prepared is also BREEAM compliant.

1.3 Report Structure

Following this introduction, the report is structured as follows:

- **Chapter 2** provides a baseline description of the site location and the surrounding highway network. Consideration is also given to the historical Personal Injury Accident record for the highway network of interest and the accessibility of the site by non-car modes;
- **Chapter 3** presents a review of the prevailing transport planning policy and other applicable guidance;
- **Chapter 4** sets out the detail of the proposed development, including, a description of the proposal, the access & service strategy and future parking provision;
- **Chapter 5** assesses the quantum and composition of traffic likely to be generated by the proposals and its assignment to the highway network, and examines the likely impact of the traffic generated by the proposals in comparison to the extant development; and
- **Chapter 6** summarises the report and provides conclusions.

2 Existing Conditions

2.1 The Site

The Site is located within Sharston Industrial Area in Wythenshawe, and fronts onto the B5168 Sharston Road, which connects to Junction 2 of the M56 at its southerly extent, Harper Road and Longley Lane. The existing development was occupied until recently by Electrium Sales Ltd (a subsidiary of Siemens) and comprises a collection of industrial buildings, developed incrementally over a number of years which totals approximately 130,000 sq. ft (12,390 sq. m) GIA. The total site area is approximately 4 acres (1.62 hectares). The location of the Site is shown on **Figure 2.1**.

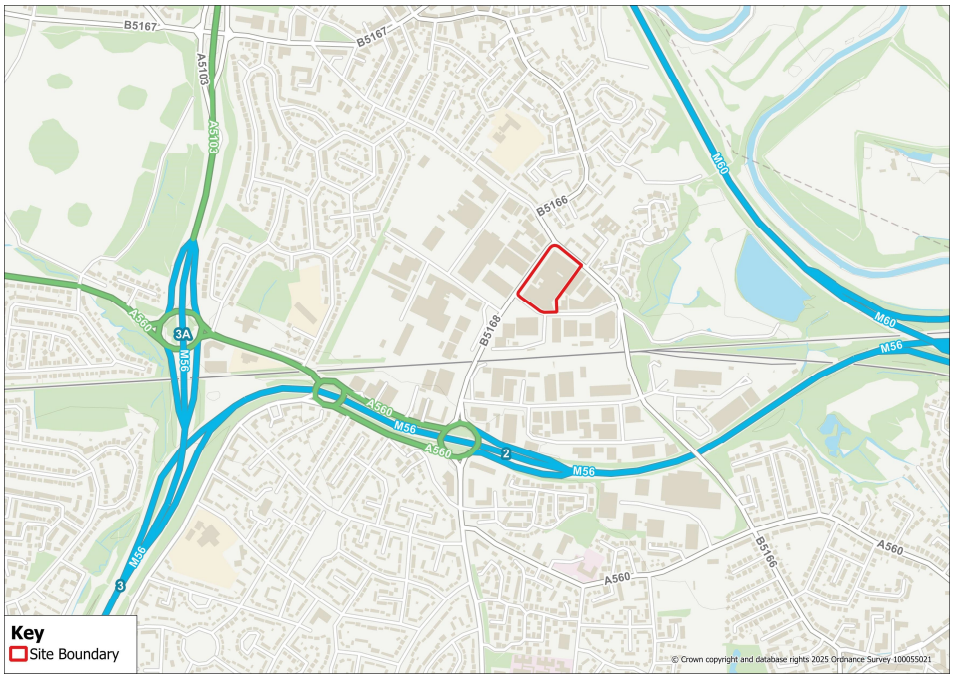


Figure 2.1 - Site Location Plan

The Site benefits from existing vehicular and pedestrian accesses on Harper Road (to the south), Sharston Road (to the west) and Longley Lane (to the north). Given the historic evolution of the existing development, several of the access points appear to have been un-used for some time. The principal vehicular accesses are located on Sharston Road and HGV loading facilities are provided on Harper Road. Additionally, there is an existing electrical substation located within the southeastern corner of the site with a dedicated

access. The Longley Lane frontage does not appear to have been used for general vehicular access for some years, except for emergency services access.

All vehicle access points to the Site have electric sliding gates. H-Bar road markings are utilised at several of the access locations and a number of Traffic Regulation Orders (TROs) are in effect, as detailed in *Section 2.2* below.

There is no public access to the Site and no Public Rights of Way (PRoW) are located within the immediate vicinity.

The adjacent areas to the east, south and west are predominately occupied by commercial and employment uses, whilst the area to the north on Longley Lane is residential. Beyond the immediate vicinity of the Site, lie the largely residential districts of Wythenshawe to the south and Northenden to the north. The M56 Junctions 2 and 3a (via the A560) provide the main access route into the industrial area for strategic traffic and forms a hard boundary between the industrial and the residential areas.

2.2 Local Highway Network

A review of the immediate adjacent highway network has been undertaken as presented below.

The highway network in the vicinity of the Site is typical for an industrial area. The roads are 30 mph single carriageways with large radii suitable for two-way HGV traffic. Footways are provided on both frontages, which utilise informal pedestrian crossings in the form of dropped kerbs and tactile paving at junctions.

The adjacent roads are subject to a 30mph speed limit and are street lit. Simple priority controlled junctions are provided throughout and multiple private access points are evident along each road frontage.

There are two TROs in force throughout the industrial estate. These include ‘No Waiting at Any Time’ restrictions, and ‘Limited Waiting’ restrictions which are in force Monday to Friday between 06:00 and 18:00.

Sharston Road runs in a north-south direction along the western boundary of the Site and provides access to the industrial area from the A560 and the M56 at Junction 2 Sharston Interchange, to the south. There are multiple existing private accesses, including two of the possible four accesses leading into the Site which appear to have been regularly used by the last site occupier and are protected by H-bar road markings.

A TRO (‘Limited Waiting’) is in force along the majority of Sharston Road. However, there are short sections of the road along the Site frontage where no TROs are in force and informal on-street parking occurs.

Sharston Road is a bus route, with bus stops located directly adjacent and opposite to the Site frontage. Each bus stop comprises an open shelter with bench and bus timetable information.

A staggered toucan crossing is located on Sharston Road just north of its junction with the M56. A shared pedestrian cycle path runs in a westbound direction commencing at the crossing and travelling along the A560 where it joins the wider cycling network at the A560/ M56 junction to the west.

Longley Lane runs in a northwest-southeast direction adjacent to the northern boundary of the Site. One of the two existing private accesses into the Site appears to have been used by the previous occupier as a fire exit and is protected by white H-bar markings. There is residential development along the northern frontage of the road.

There is a 'No Waiting at Any Time' TRO in force along the majority of Longley Lane, with short sections where 'Limited Waiting' restrictions are in force as detailed above.

Harper Road runs along the southern boundary of the Site and provides a connection between Sharston Road and Longley Lane. There are three existing accesses into the Site which are protected with H-bar road markings. There are no TROs in force, and as a result on-street parking is prevalent along the majority of Harper Road.

2.3 Existing Footway Condition

The existing footway adjacent to the perimeter of the Site has a bounded surface with bullnose kerbs fronting the carriageway channel line. Tactile paving and flush kerbs are provided at the junctions of Longley Lane, Sharston Road and Harper Road. The footways along the perimeter of the Site vary in width, ranging between approximately 2.2m and 3.8m.

The footways include tree planting and multiple service covers, all of which are currently appropriately finished and appear to be safe and operational. It should be noted that the surface around the two trees on Longley Lane adjacent to the carriageway is breaking up likely due to movement in the tree roots. However, the footway is wide and a continuous clear and flat width in excess of 2m is available between the trees and the back of footway.

Whilst there is evidence of patchwork service repairs along parts of the footways, the surface is predominantly smooth with no tripping hazards identified.

2.4 Site Accessibility Review

2.4.1 Pedestrian Accessibility

Reference to Table 3.2 of the IHT document, 'Providing for Journeys on Foot (2000)', suggests that the preferred maximum walking distance to common facilities is 1.2 km and up to 2 km for commuting.

BREEAM guidelines indicate that the site should be within 500m of a range of local amenities. **Figure 2.2** illustrates the location of the amenities in the vicinity of the Site, which includes three supermarkets / convenience stores, various food outlets, a post office, a GP and a pharmacy, leisure facilities and two schools. The majority of the amenities are located within Northenden and sit on the edge of the 1.2km catchment, with further amenities located just outside the catchment area. Only one amenity, namely a convenience store, is located within the 500m catchment area. However, all the amenities can be reached by foot via safe pedestrian routes.

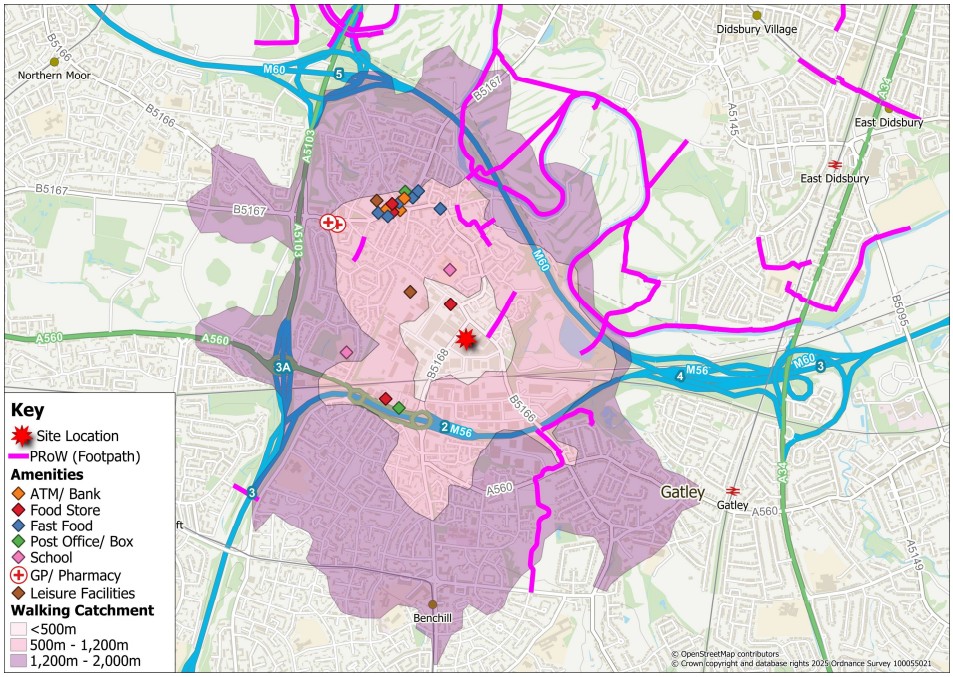


Figure 2.2 – Walking catchment

Furthermore, the 2km catchment area also includes parts of Wythenshawe and Gatley. As such, walking is a viable option for travel to work for employees living in these areas.

In terms of pedestrian infrastructure, the footways in the vicinity of the Site are typically of good quality, with informal crossings and tactile paving present at the junctions and private accesses in the area.

Additionally, a staggered toucan crossing is located on Sharston Road, just north of Sharston Interchange, providing a safe, controlled crossing point for pedestrians and cyclists.

2.4.2 Cycle Accessibility

It is widely recognised that cycling is a potential substitute for short car trips, particularly those under 5 miles (8 km) and can form part of a longer journey by public transport.

Applying this criteria, **Figure 2.3** shows the area accessible by bike. At its furthest extent this includes the major residential catchment areas of Stretford to the north; Altrincham and Hale to the west; Manchester Airport to the south; and Stockport to the east.

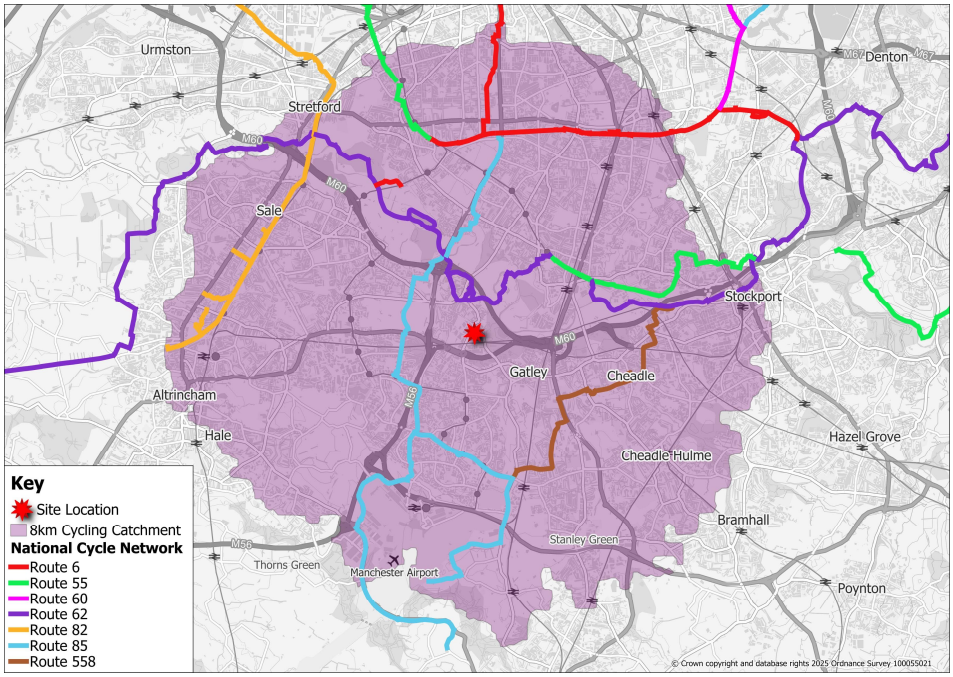


Figure 2.3 – Cycle catchment

The relevant extract from the Manchester Cycle Map is shown as **Figure 2.4**, with the full map included as **Appendix B**.



Figure 2.4 – Extract of TfGM's Manchester Cycle Map

As illustrated above, there is a shared pedestrian/ cycle path which runs east-west from the toucan crossing on Sharston Road. There is another toucan

crossing along the eastern arm of the A560 allowing cyclists to cross and join the cycle path which runs underneath the M56 and continues to the west.

There are also a number of National Cycle Routes (NCR) within the 8km catchment area, as illustrated on **Figure 2.4**, which provide access to the nearby residential areas.

The closest routes are NCR 62 and NCR 85. NCR 62 runs in an east-west direction going through Northenden and the outskirts of Sale and Altrincham. It extends towards Warrington in the west and joins NCR 55 at Didsbury and continues eastbound towards Stockport. NCR 85 runs in a north-south direction to the west of the Site. To the north it passes through Northern Moor and West Didsbury before joining NCR 6 to Manchester City Centre. To the south it passes through Newall Green and Woodhouse Park before terminating just south of the Airport.

2.4.3 Public Transport Accessibility

Bus

Table 4 of the Chartered Institution of Highways and Transportation (CIHT) document 'Buses in Urban Developments (2018)' suggests a maximum recommended walking distance of 500m to a bus stop within a core bus corridor which provides two or more high frequency services; and 300m to a bus stop with less frequent routes.

The accessible bus stops, measured from the centre of the Site, are shown in **Figure 2.5**.

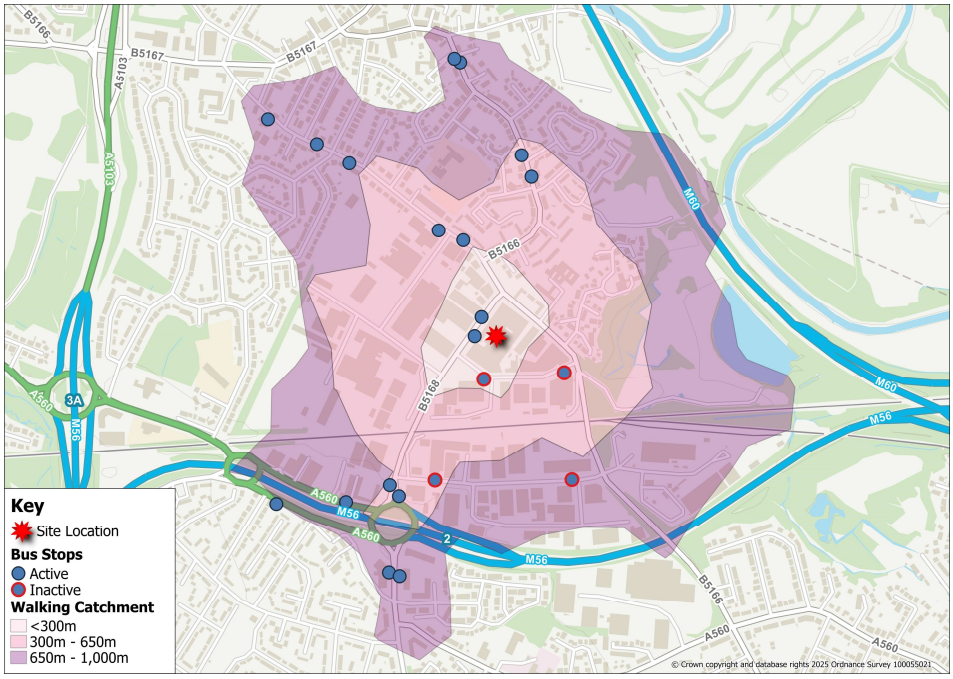


Figure 2.5 – Public Transport nodes accessible on foot

The closest active bus stops to the Site are located on Sharston Road immediately adjacent to the western boundary of the Site, and are within 50m - 100m of the centre of the Site and as such are well within the maximum walking distance recommended by CIHT. As part of the development it is proposed that

the southbound bus stop will be relocated immediately next to (and overlapping) its current location so there will be no change to accessibility (further details are provided in *Section 4*).

The bus stops are serviced by a total of five bus routes operated under the Bee Network and provide a high level of service provision and frequency immediately next to the Site. Public transport accessibility is therefore good. A summary of the bus services which are accessible from these bus stops is provided in **Table 2.1**.

Service	Route	Frequency		
		Mon-Fri	Sat	Sun
43	Piccadilly Gardens - Manchester Airport	10 mins	10-20 mins	15-30 mins
103	Piccadilly Gardens - Manchester Airport	30 mins	30 mins	1h
370	Stockport - Altrincham	1h	1h	1h
371	Stockport - Altrincham	1h	1h	No service

Table 2.1 – Summary of bus services

Bus stops are also located on Longley Lane and Royle Green Road to the north of the Site which provide access to additional services, namely 719, 743 and 781. However, these are school services only which operate once a day and are therefore not available for use by the future occupants of the proposed development.

Rail

The Chartered Institution of Highways & Transportation (CIHT) document 'Planning for Walking' (2015) suggests that people will walk up to 800m to get to a railway station, which reflects the greater perceived quality or importance of rail services. This criteria can also be applied to light rail services, such as Metrolink.

The closest Metrolink station to the Site is Benchill, located on Brownley Road, approximately 1.6km walking distance, which equates toa 22 minute walk time. Additionally, the stop can be also accessed via bus service 43. The station is on the route between Manchester Victoria Interchange and Manchester Airport, via Manchester City Centre.

The closest railway station to the Site is Gatley which is approximately 2.2km walking distance resulting in a walk time of approximately 30 minutes. Additionally, the railway station can be accessed via bus services 370 and 371.

Given the walking distanced identified it is unlikely that perspective occupants would choose to utilise rail / Metrolink services unless additionally utilising bus or cycle as part of a multi-mode journey.

Greater Manchester Accessibility Level

The Greater Manchester Accessibility Level (GMAL) for the Site has been reviewed. GMAL is a detailed and accurate measure of the Site's accessibility using the public transport network. The method is a way of measuring the density of public transport provision at any location within the Greater Manchester region. The GMAL in the vicinity of the Site is shown in **Figure 2.6.**

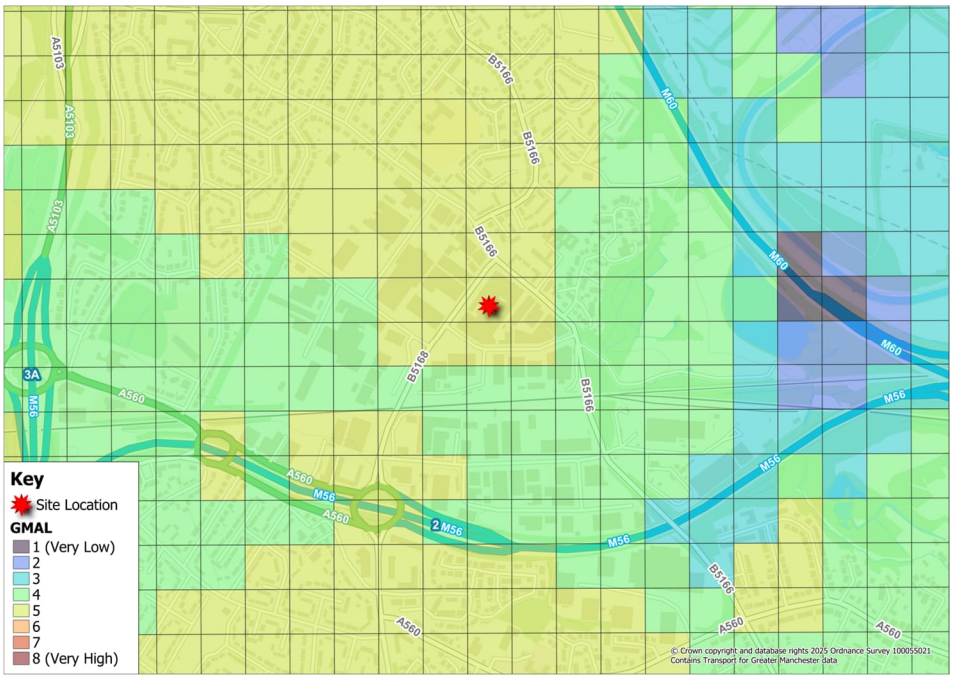


Figure 2.6 – Greater Manchester Accessibility Index Map

As it can be seen, the Site has a GMAL of 5, which equates to a good level of accessibility.

BREEAM Accessibility Index

BREEAM guidelines indicate that a compliant public transport node includes any bus stop within 650m and any railway station within 1,000m of the assessed building's main entrance, measured via a safe pedestrian route. **Figure 2.5** shows the location of compliant public transport nodes in the vicinity of the Site. Given that the development comprises multiple buildings, the walking distance has been measured from the centre of the Site. The compliant facilities include bus stops directly outside the Site on Sharston Road.

Based on proximity to the identified nodes, an assessment using the BREEAM Accessibility Index calculator tool has confirmed that the site has an AI rating of **5.36**.

2.5 Personal Injury Accident Record

Personal injury accident data have been obtained from CrashMap for the latest five-year period where data are available (2019-2023 inclusive). The data indicate there were a total of 14 injury accidents on the adjacent highway network of interest during that period. There were 13 collisions resulted in Slight injuries, 1 resulting in a Serious injury and no Fatalities.

The extent of the network of interest and the respective locations of these collisions are shown in **Figure 2.7**.

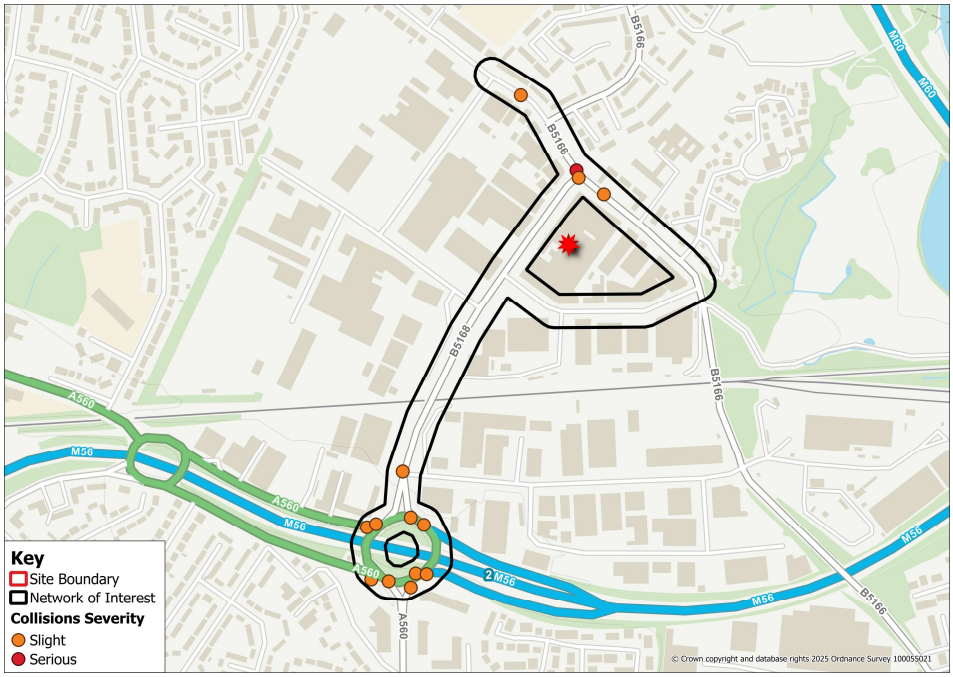


Figure 2.7 – Collision Location Plan

From **Figure 2.7**, it can be seen that the majority of collisions occurred at, or adjacent to, the A560/ M56 junction. All the collisions resulted in minor injuries. Given the close proximity of the Sharston Industrial Area, it is notable that only two of the collisions involved an HGV. The number and type of collisions at the A560/ M56 junction are typical of a large urban signalised junction.

The remaining four collisions occurred on Longley Lane. Two of these were at the junction with Sharston Road. One collision involving two vehicles occurred in 2023 and resulted in a serious injury to one person..

All collisions involved vehicle driver/ passenger casualties, and none involved pedestrians, cyclists, or motorcycles.

The type and frequency of recorded collisions on the highway network of interest are typical of what could be expected within a busy urban setting, particularly at the A560/ M56 junction which is a major interchange.

The data examined does not highlight any specific road safety concerns on the highway network of interest and therefore the proposed development is not expected to have any notable impact on road safety.

3 Transport Policy Review

3.1 Introduction

The following section details the findings of a review of the national, regional and local transport planning policies which are relevant to the Site.

3.2 National Policy

3.2.1 National Planning Policy Framework (2024)

The National Planning Policy Framework (NPPF) sets out the Government's planning policy and its expectations in terms of the application of this policy. The purpose of the NPPF is to achieve sustainable development, with a presumption that development should be allowed to proceed without delay if it meets the criteria under the roles of delivering economic, social and environmental objectives. In addition, NPPF states that proposals according with an up to date development plan should also be approved.

At its core, NPPF requires the planning system to:

"...actively manage patterns of growth" to make fullest possible use of public transport, walking and cycling, and focus significant development in *"locations which are or can be made sustainable."*

"However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

Furthermore, paragraph 115 states that decisions should take account of whether:

- sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;
- Safe and suitable access to the site can be achieved for all users; and
- any significant impacts from the development on the transport network, or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.

and paragraph 116 states:

"Development should only be prevented or refused on transport grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe"

Paragraph 118 states that "*all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed*".

3.3 Regional Policy

3.3.1 Greater Manchester Transport Strategy 2040 (2021)

The Regional Centre is a major driver of economic growth in Greater Manchester and will continue to be in the future. As such, the Strategy aims to increase the number of sustainable transport trips by improving public transport access to the Regional Centre and encouraging active travel for people who live and work in the area.

The Strategy will support development of brownfield sites into mixed-use and housing developments. Proposals should ensure provision of quality walking and cycling infrastructure, appropriate parking provision, adequate servicing arrangements and other interventions supporting sustainable travel, including car clubs.

3.3.2 Places for Everyone (2024)

The Places for Everyone Joint Development Plan (PfE) was adopted in March 2024. It sets out the development plans for the City up to 2039. The plan identifies the amount of new housing, office and industrial development across Greater Manchester, site allocations for employment and housing, and supports the delivery of key infrastructure.

Policy JP-C8: Transport Requirements of New Development outlines the requirements for new developments to promote walking, cycling, and public transport whilst reducing car dependency to create sustainable, liveable environments.

Key strategies detailed in the policy include enhancing connectivity and permeability whilst prioritising safe and efficient routes for pedestrians and cyclists and ensuring direct access to nearby facilities and transport links.

Adequate parking for cars, bicycles, and heavy goods vehicles should be provided.

Appropriate provision for delivery and servicing should be provided, ensuring it meets road safety requirements and reduces traffic congestion and the number of vehicle movements.

Planning applications will be accompanied by a Transport Assessment / Transport Statement and Travel Plan where appropriate.

3.4 Local Policy

3.4.1 Manchester Core Strategy (2012)

The Manchester Core Strategy comprises the Core Strategy document (2012) and the Addendum to Manchester Core Strategy (2024). The Addendum details the Core Strategies that have been partially replaced following the adoption of the PfE plan.

The key Core Strategy policies relevant to the proposed development are outlined below.

Policy EC 10: Wythenshawe

The majority of economic development within Wythenshawe will be focused on the Manchester Airport Area, University Hospital South Manchester, and the existing employment sites along the West and East Wythenshawe Development Corridors including the Sharston Industrial Estate.

The existing employment role of Sharston Industrial Estate will be supported, including the existing industrial and manufacturing uses. Development proposals should ensure employment opportunities are made accessible to local communities and have good access to the national motorway network M56 and M60.

Policy T 2: Accessible areas of opportunity and need

New developments should be easily accessible to residents by walking, cycling and public transport. This is particularly relevant to providing access to various strategic employment sites.

Policy DM 1: Development Management

All new developments should consider the following key issues :

- Appropriate site layout;
- Impact on the surrounding areas in terms of the design, scale and appearance of the proposed development;
- Effects on amenity, including privacy, light, noise, vibration, air quality, road safety and traffic generation'
- Ensure buildings are fully accessible to disabled people, with access to new development by sustainable transport modes;
- Refuse storage and collection; and
- Vehicular access and car parking.

Appendix B of the Core Strategy provides details of parking standards.

3.5 Other Applicable Guidance

3.5.1 BREEAM UK New Construction (v6.1)

The BREEAM UK New Construction V6.1 scheme can be used to assess the environmental life cycle impacts of new non-domestic buildings at the design and construction stages.

The transport category includes two assessment criteria:

- Tra 01 Transport assessment and travel plan (2 credits)
- Tra 02 Sustainable transport measures (10 credits)

The Transport Assessment (Transport Statement in this case) shall cover current and future travel patterns, existing pedestrian and cycling infrastructure, existing amenities in the vicinity, and accessibility assessment. The Travel Plan

shall consider measures such as provision of electric vehicle charging stations, cycle storage, pedestrian and cycle facilities, and car parking restrictions.

Tra 02 relates to the sustainable transport measures implemented at the proposed development, and the proximity to amenities and quality public transport services. Credits are awarded according to the existing Accessible Index (AI) of the project, calculated for Tra 01, and the total number of points achieved for the implemented measures.

4 Development Proposals

4.1 Development Description

The Site is located at the former Electrium Sales Ltd Site, 1934 Sharston Road, Wythenshawe, comprising approximately 12,390 sq. m of floorspace.

The proposed development quantum is approximately 8,511 sq. m (GIA) comprising the erection of two storey Warehouse Units (Use Class B2 / B8), including ancillary offices and trade counters, with all associated works including landscaping, car parking and the provision of a revised access arrangements from Sharston Road and Harper Road. The unit sizes are shown in the **Table 4.1** below:

Unit	Floor Area GIA
Unit 1	3,069 sq. m
Unit 3	823 sq. m
Unit 4	697 sq. m
Unit 5	581 sq. m
Unit 6	1,013 sq. m
Unit 7	690 sq. m
Unit 8	463 sq. m
Unit 9	609 sq. m
Unit 10	565 sq. m
Total	8,511 sq. m

Table 4.1 – Development Quantum

The Site layout plan is shown in the Fletcher Rae drawing included as **Appendix C**.

4.2 Proposed Site Access and Internal Road Network

Primary access to the Site will be provided by two existing accesses on Sharston Road. The junctions will be upgraded to form adoptable standard simple priority controlled junctions. The improvements will enable two-way HGV movements (right in / left out - towards the M56) at each junction whilst ensuring

that an HGV can egress without requiring a manoeuvre which strays into the opposing northbound traffic lane. As part of the pre-application liaison, and at MCC request, pedestrian refuge islands have been provided at each access to assist pedestrians crossing along the eastern frontage of Sharston Road.

A further access will be provided on Harper Road to facilitate access to the car park for Unit 1. The proposed access will be a rationalisation of, and upgrade to, the somewhat congested existing access points to the Site from Harper Road and will be provided in the form of an adoptable standard simple priority junction, suitable for the two way movement of cars.

No access is proposed to be taken from Longley Lane.

All remaining existing access points to the Site will be permanently closed and footpaths re-instated.

The three improved junctions will provide access to the Site for all car and HGV traffic as well as pedestrians and cyclists. Dropped crossings and tactile paving will be provided at all three access junctions. As noted, the junctions on Sharston Road will also include pedestrian refuges.

All access points will be gated with electric sliding gates to ensure that they do not impact upon the normal operation of the adopted footway, or highway. The gates will be permanently open during normal operational hours so vehicles will not need to wait on the carriageway to gain access to the Site.

Visibility at the two junctions on Sharston Road is provided in accordance with Manual for Streets (MfS) guidance for a 30 mph road, namely an X-distance of 2.4 metres and a Y-distance of 43 metres. Given the more constrained nature of the car park access on Harper Road, visibility at the car park access junction is provided in accordance with the guidance for a 20 mph road, namely an X-distance of 2.4 metres and a Y-distance of 25 metres. This standard is appropriate as vehicle speeds on Harper Road are typically low. A plan showing the proposed access arrangements and junction visibility is included as **Appendix D**.

In order to ensure highway visibility is maintained, and to facilitate safe access and egress, specifically for HGVs, it is proposed that the existing TROs on Sharston Road and Harper Road are amended at each access to comprise ‘No Waiting At Any Time’ restrictions (double yellow lines). It is understood that the identified TROs will be progressed as part of the S278 Agreement, at the cost of the Applicant following receipt of planning consent.

There is no proposed change to the extent of adopted highway as a result of the changes to the Site accesses. The internal site infrastructure will remain private.

The internal site layout has been designed to accommodate the movement of the largest anticipated vehicles (a 16.5m articulated HGV), with a carriageway width of 7.3m.

A Stage 1 Road Safety Audit (RSA) has been undertaken to confirm the appropriateness of the form and location of the junctions, based on background traffic conditions and their intended use. The RSA1 report and designer’s response is included as **Appendix E**.

4.3 Servicing Strategy

The Site will accommodate units which are serviced by a range of commercial vehicles, including, articulated HGVs and large vans, dependent on the final occupiers. As such, the internal site layout has been designed to accommodate the two-way movement of maximum length HGVs (16.5m). A plan showing the swept paths of vehicles accessing the individual service yards is included as **Appendix F**.

As shown in the Plan included as **Appendix C**, a new substation is located adjacent to Unit 1. Typically, the substation would be periodically serviced from a small van which will utilise one of the adjacent parking spaces.

All HGV traffic will be routed via the M56 Junction 2 and 3a (via the A560). HGVs will head northbound along Sharston Road before turning right into the Site, and will egress left out of the Site and follow the same route.

The junction will enable two-way HGV movements whilst ensuring they are not required to stray into the opposing northbound traffic lane. Internal signage will be provided to reinforce the operation of the 'Left Only' exit for HGVs onto Sharston Road.

4.4 Pedestrian and Cycle Facilities

Cycle parking will be provided as detailed in *Section 4.6.5* below. Covered cycle shelters are provided on paved, non-traffic areas at key locations throughout the Site as shown on the masterplan included as **Appendix C**. Footways provide safe pedestrian routes from each parking area and cycle store into the individual units. Additionally, 1.8m pedestrian routes are demarcated alongside the internal road network within the Site. Provision for lockers and changing facilities are provided within each building.

There are no stepped areas within the Site and all crossing points will comprise dropped kerbs to ensure easy access for all users.

As outlined in *Section 4.2*, the improved junctions off Sharston Road include refuge islands to assist pedestrians crossing the Site accesses. Additionally, as part of the S278 works, the redundant accesses will be reinstated as continuous footways to improve the pedestrian environment along the site frontages. Further details are provided in *Section 4.7*.

4.5 Public Transport Provision

As noted in *Section 2.3.3*, the Site is well located to take advantage of high frequency quality bus services which stop directly outside of the boundary on Sharston Road, providing direct and onward routes to surrounding districts.

The proposals include for the slight relocation of the southbound bus stop on Sharston Road to accommodate the improved access junction. Details of the stop relocation will be confirmed with TfGM and MCC as part of the S278 works.

4.6 Parking Provision

Car parking for the proposed development is provided in accordance with the standards set out in the Manchester Core Strategy (2012). The applicable standards relate to sites that are classed as located outside the City Centre or District Centres. The relevant parking standards are included as **Appendix G**.

The proposals comprise two land-use classes (general industry - B2 and storage & distribution - B8). **Table 4.2** sets out the applicable standards (maximum for cars / minimum for cycles).

Class	Description	Car Parking (per sqm GFA)	Disabled Parking (% of total)	Cycle Parking (per sqm GFA)
B2	General Industry	1:45	Individual bays for each disabled employee plus 2 bays or 5% of total capacity (whichever is greater)	1:450
B8	Storage and Distribution	1:100		1:850

Table 4.2 - Parking Standards

All car parking bay dimensions are in accordance with MCC guidelines:

- Standard parking bays minimum 2.4m x 4.8m; and
- Disabled parking bays minimum 3.6m x 6.0m .

A minimum 6m aisle width is provided to allow vehicles to safely manoeuvre within the car parks.

A plan showing the swept paths of cars accessing the car park spaces is included as **Appendix F**.

4.6.1 Car Parking Requirement

It can be seen from **Table 4.2** that the B2 standard provides a higher maximum potential car parking capacity than B8. Although the end users of the development are unknown at this stage, if the development comprised 100% B2, it would result in a maximum parking allowance of 189 spaces. If it were 100% B8, this would result in 85 spaces.

The proposals include for a total of **86 parking spaces** which reflects the likely mixed B2 / B8 occupancy of the various units, the level of car parking demand expected, the very good sustainable transport characteristics of the Site and the Applicants experience with other similar scale developments.

4.6.2 Parking Accumulation Study

To demonstrate the appropriateness of the proposed provision the following section details the anticipated car parking accumulation for the Site. As agreed with MCC, this is based on the worst-case scenario for the Site with regards to trip generation with the whole Site being occupied for B2 development. Further details on the derivation of the trip rates and the trip generation for the Site are provided in *Section 5.2.*

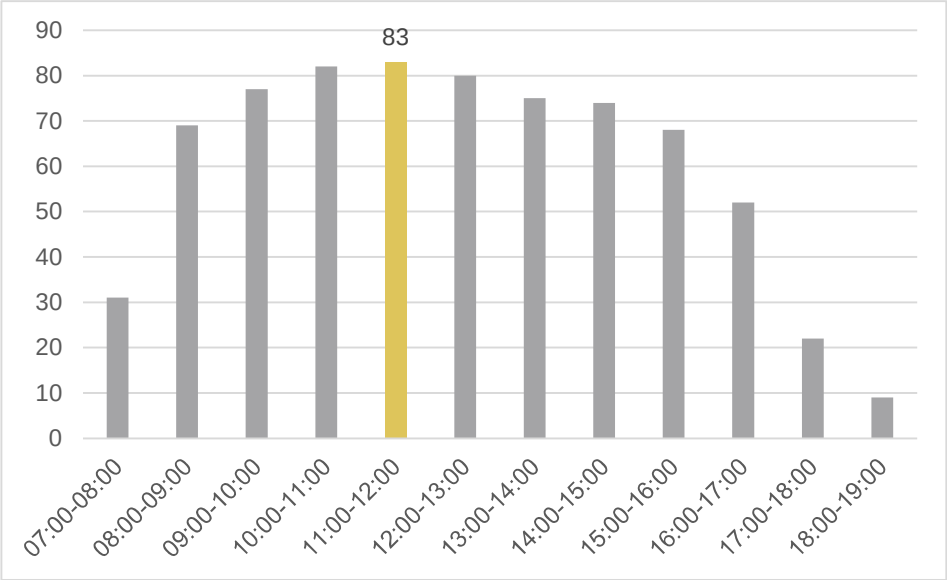


Figure 4.1 – Car Park Accumulation (All B2 Development)

As can be seen from the graph above, the peak car park accumulation is predicted to occur between 11:00 and 12:00 with 83 vehicles. This confirms that the proposed number of car parking spaces (86 spaces) can accommodate the anticipated peak parking demand.

4.6.3 Disabled Parking

The standards state that provision for disabled parking spaces should be provided on a 1 to 1 basis for currently known disabled employees, plus either 2 spaces or 5% of total capacity, whichever is greater. As the number of disabled employees cannot be identified at this stage, the proposal is to provide **13 disabled parking spaces** which is well above the 5% requirement. If a need for additional spaces is identified, standard car parking spaces can be converted as required. The spaces will be located in the most accessible location relative to the entrances to the units.

4.6.4 Motorcycle Parking

No parking standards are provided for motorcycles. However, a total of **4** designated motorcycle spaces will be provided. The introduction of additional spaces will be considered if the demand increases such that it is needed.

4.6.5 Car Share Spaces

A total of **10 Car Share spaces** will be marked out for exclusive use by employees who have chosen to car share. These spaces are distributed throughout the site and are located close to the building access points for additional convenience. This provision is in accordance with the BREEAM guidance.

4.6.6 Cycle Parking

From **Table 4.2**, it can be seen that an all B2 occupation results in the greatest cycle parking requirements. A development comprising 100% B2 would result in

a minimum requirement for 19 cycle spaces. This is significantly higher than the minimum MCC requirement.

The proposals include a total of **54 cycle parking spaces**, provided across the site, which has been derived using BREEAM cycle parking standards.

The cycle parking provision will be in covered shelters suitable for long stay cycle parking and is located in convenient locations for users.

Once the Site is operational, cycle usage will be monitored as part of the Travel Plan to identify if further provision is needed.

4.6.7 Electric Vehicle Provision

Whilst there are no formal parking standards for electric vehicle provision, the Core Strategy states that the MCC will support proposals that facilitate modes of transport that reduce carbon emissions e.g by incorporating charging points for electric vehicles, subject to their appropriate design and location.

Following discussions with MCC, the council has requested that electric vehicle charging spaces are provided at a rate of 1 space per 1,000 sq. m. This results in a total requirement for 8 EV spaces.

A total of **20 EV Ready parking spaces** are proposed as part of the proposals in accordance with the BREAAM guidance. 8 of the EV ready spaces will be designated disabled parking spaces.

4.7 Footway Condition

The existing accesses to the Site from Sharston Road, Harper Road and Longley Lane, which are not being utilised as part of the development, will be permanently closed and continuous footways reinstated as part of the S278 works. Footways will be resurfaced with tarmacadam to match the existing surfacing, with kerbs raised as appropriate.

As previously stated, the current condition of the footways surrounding the Site is noted as being in good order, albeit there is evidence of patchwork repair along parts. Some sections on Longley Lane are noted as showing signs of cracked surfacing as a result of tree root heaving, although the footway is wide on this frontage and a continuous undamaged, flat route of at least 2m in width is available throughout.

MCC has noted, in the comments received as part of the scoping process (**Appendix A**), that it would like to see the full extent of footway fronting the development resurfaced. However, from the above review, it is deemed that its condition does not justify such a significant level of works. The closure of the redundant accesses and reinstatement of a continuous footway will provide a significant pedestrian amenity benefit on the full perimeter of the site. As such the proposed footway works are limited to that identified at each access point to be closed.

4.8 Bus Stop Relocation

The existing southbound bus stop and bus shelter on Sharston Road will need to be slightly relocated, (approximately 10m to the north), to enable the southern site access to be upgraded to MCC requested design standard. The

proposed relocation is subject to agreement with TfGM and will be confirmed as part of the S278 design.

5 Traffic Generation

5.1 Introduction

This chapter describes the methodology used to derive the proposed trip generation for the worst-case scenario with regards to development trips (all B2 development). Given that the extant site uses are identical to the proposed, MCC has agreed that a comparison analysis of trip generation is appropriate in order to assess the net traffic impact of the proposed development on the local highway network.

For clarity, the proposed development has a total GIA of 8,511 sq. m and the extant development has a total of 12,390 sq. m. Therefore, the redevelopment of the site will result a net reduction in floor area of 3,879 sq. m or 31% and traffic generation from the site can be anticipated to reduce by a similar percentage.

5.2 Trip Generation Analysis

Trip rates have been derived from the TRICS database for Industrial Units (excluding Greater London and Ireland). The TRICS output file is included as **Appendix H**.

The TRICS classification for Industrial Units best reflects the proposed worst-case scenario for trip generation of all development units being occupied by B2 uses. The type of occupiers, includes, small scale manufacturing, storage hubs, trade counters and depots.

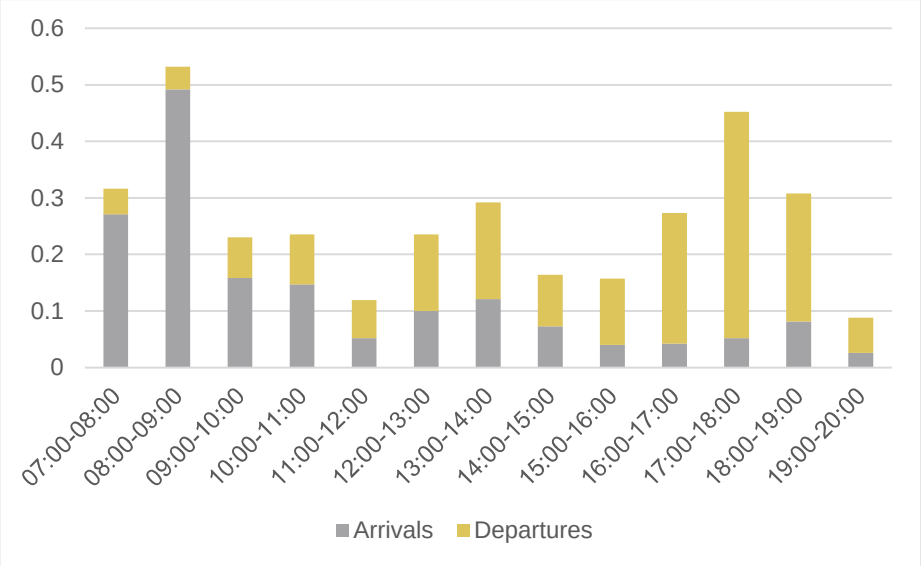


Figure 5.1 –Vehicle Trip Rate Profile

The profile of arrivals and departures shows that the highest hourly vehicle trips are predicted to occur during 0800 to 0900 hours and 1700 to 1800 hours reflecting the typical AM and PM peak hours.

The Vehicle Trip Rates per 100m^2 GIA, and Vehicle Trips for these time periods (based on the proposed 8,511m^2 GIA) are set out below. The vehicle trips are split into Lights and Heavies, where the latter is derived from the OGV trip rates extracted from TRICS, and the former includes all other vehicles for robustness.

Type	AM Peak			PM Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Lights	0.472	0.03	0.502	0.049	0.398	0.447
Heavies	0.02	0.01	0.03	0.003	0.002	0.005
All Vehicles	**0.492**	**0.04**	**0.532**	**0.052**	**0.4**	**0.452**

Table 5.1 –Vehicle Trip Rates

Type	AM Peak			PM Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Lights	40	3	43	4	34	38
Heavies	2	1	3	0	0	0
All Vehicles	42	3	45	4	34	38

Table 5.2 –Development Vehicle Trip Estimates

5.3 Traffic Generation Comparison

Due to the lack of available traffic data for the existing development whilst the Site was occupied by Electrium Sales Ltd, the trip generation for the extant development has been estimated using the same trip rates as for the proposed development reflecting the identical B2 / B8 land uses.

As the existing buildings can be lawfully reoccupied for B2/ B8 uses without requirement for further planning consent the absence of historical trip data is not considered material.

Table 5.3. presents the estimated trip generation for the extant development using the existing quantum of 12,390m^2 GIA. The Net Development Trip Comparison shows the difference in flows when compared against the proposed development trips in **Table 5.2**.

Type	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Extant Development Trips						
Lights	58	4	62	6	49	55
Heavies	2	1	4	0	0	1
All Vehicles	***61***	***5***	***66***	***6***	***50***	***56***
Net Development Trip Comparison						
Lights	-18	-1	-19	-2	-15	-17
Heavies	0	0	-1	0	0	-1
All Vehicles	-19	-2	-21	-2	-16	-18

Table 5.3 – Extant and Proposed Development Trips Comparison

The above illustrates the predicted reduction in vehicle trips in both peak hours resulting from the proposed development. As such, the proposals will result in a net positive impact on the local transport and highway networks.

5.4 Trip Distribution

The distribution of employee and HGV trips for the proposed development is assumed to be unchanged from the extant development given the identical land use classes. Therefore all HGVs movements will approach from and depart towards the M56 to the south via Sharston Road whilst private cars and light vehicles will use the full extent of the local and strategic highway network, as appropriate.

The overall reduction in trips will be uniform across all trip modes and proportionally throughout the network.

5.5 Modal Split

For the purposes of understanding the likely demands on sustainable travel infrastructure, the predicted demand on each mode has been calculated. The modal split has been derived from NOMIS 2011 census data "*Method of travel to work (Workplace population)*" with the location of work set as "*E02001090 : Manchester 046 (2011 super output area - middle layer)*".

Although more recent data are available, due to the uncertainty around the effects of the Covid-19 pandemic on the results of the Census 2021, it is generally accepted that the Census 2011 data is more appropriate to use for this purpose.

The NOMIS data encompasses "Driver" trips, which correspond closely with the two-way "light" vehicle trips detailed in **Table 5.2** (development trips). The remaining mode shares have then been estimated based on this relationship to

adjust the usage of each mode according to its relative percentage split, as illustrated in **Table 5.4** below.

Overall, a total of 65 and 57 people trips are anticipated in the AM and PM peak, respectively.

Mode	%age	AM Peak	PM Peak
Driver	68%	43	38
Car Share	6%	4	3
Taxi	1%	1	1
Motorcycle	<1%	0	0
Bus	12%	8	7
Train	1%	1	1
Tram	1%	1	1
Bicycle	3%	2	2
Foot	7%	5	4
Total	***100%***	***65***	***57***

Table 5.4 – Multi Modal Split and Resultant Trips

Given the location of the Site, it is unlikely that future occupants will travel by train or tram although these trips are minimal in any event so it is likely that they would be undertaken by bus. As demonstrated, the additional demand on bus services will be modest and can be accommodated by the currently available provision. The operator will benefit from an increase in patronage / fare box from the redevelopment of the Site and no additional infrastructure is required.

Similarly, the quantum of additional cycling and pedestrian trips can be easily accommodated by the existing infrastructure.

6 Summary and Conclusions

This TS has been prepared on behalf of Kier Sharston Limited, to support an application for full planning permission for the proposed redevelopment of the former Electrium Sales Ltd Site in Wythenshawe, comprising the demolition of the existing buildings and reprovision of, 8,511m^2 GIA of industrial and logistics land uses (Classes B2 / B8).

The TS has been prepared in line with best practice and the scope has been agreed with MCC. In addition, this TA has been prepared in line with BREEAM specific guidance. A Stage 1 Road Safety Audit and an Interim Travel Plan have also been undertaken.

The development Site is located within Sharston Industrial Area within Wythenshawe, and fronts onto Sharston Road, Harper Road and Longley Lane. The existing development was occupied until recently by Electrium Sales Ltd totalling approximately 12,390 sq. m GIA.

A review of the local highway network has been undertaken which identifies the existing infrastructure providing access to the Site. An Accessibility Audit has also been undertaken to review the Site's accessibility by sustainable means, including public transport, cycling and walking.

The Audit identifies that the Site is ideally located to take advantage of numerous local facilities on foot and commuting trips on foot and by bicycle. It is also noted that the Site is well located to take advantage of high frequency bus services within easy walking distance, although tram and train provision fall outside of the recommended walking distance in prevailing guidance. The Site has a GMAL of 5, which equates to a good level of accessibility.

Personal injury accident data have been reviewed for the latest recorded five-year period , which identified 13 collisions resulting in Slight injuries, 1 resulting in a Serious injury and no Fatalities. The type and frequency of recorded collisions are typical of what could be expected within a busy urban setting and do not highlight any specific road safety concerns on the highway network of interest.

A review of the relevant national, regional and local transport planning policies has been undertaken. The proposed development accords with these policies and follows the design guidance therein.

The TS provides details of the proposed development with regard to traffic and transport, including, the proposed access and servicing strategy, proposed pedestrian and walking facilities, car and bicycle parking provision and works proposed along the site frontages.

Forecast traffic flows and multi-modal trips have been identified and it is noted that the predicted level of demand for walking, cycling and public transport can be easily accommodated within the existing provision.

A comparison of traffic generation between the extant and the proposed development has been undertaken, with historic traffic flows being derived against the same trip rates used for the proposed development, given that the existing buildings can be lawfully reoccupied for B2/ B8 uses without requirement for further planning consent. The comparison highlights that the proposals will result in a net positive impact on the local transport and highway networks as a result of a reduction in trips.

The findings of this TS identify no reason why the development should not be granted planning permission with regards to transport impacts.

Appendix A – Pre-Application Comments

PRE-APP 570 Sharston Industrial Estate, Wythenshawe.

Context:

The proposal relates to the demolition of the existing buildings at No.1934 Sharston Road in Wythenshawe, comprising approximately 12,390 sq. m of floorspace and the redevelopment of 8,473 sq. m new B2 (General Industrial) / B8 (Storage and Distribution) floorspace.

The site is located within the Sharston Industrial Area.

It is bounded by Sharston Road to the west, Longley Lane to the north and Harper Road to the south. There are existing industrial units to the east with existing residential dwellings to the north.

The site was until recently occupied by Electrium Sales Ltd. The existing use of the site comprises B2 (General Industrial) / B8 (Storage and Distribution) use with ancillary office (Class E) space.

Documentation Submission:

Highways request that the following documents are submitted for the proposed development:

- Transport Statement;
- Travel Plan;
- Road Safety Audit Stage 1; and
- Service Management Strategy

The Transport Statement should comprise of:

- Overview of existing conditions;
- A review of highway safety within the vicinity of the site;
- An audit of accessibility by all modes of travel including walking, cycling, and public transport;
- Consideration of the impact of the development, by all modes/vehicle types, on the highway network; and
- Review of the development site access arrangement and internal operations, including parking (disabled, EV and cycle) and swept-path assessments.

TfGM have also been consulted – comments are herein contained within this document.

Trip Generation and Operational Assessment:

- As part of the Transport Statement, a multi-modal trip generation assessment is required based on the worst-case B2/B8 development scenario.
- A Net Trip Generation Assessment for the extant and proposed development is acceptable.
- Any junctions experiencing an increase of 30 vehicles per hour should be assessed.

Existing Conditions:

- A review of the existing traffic condition surrounding the site should be undertaken.

Highways Safety:

- A review of accident history for the past five-years, noting any patterns or trends is required.

Sustainable Accessibility:

- A sustainable access assessment via walking, cycling and public transport is required. This should also provide information on pedestrian and cycle infrastructure between the site and local amenities.
- Any improvements to the site accessibility should be identified.

Access:

Existing: -
There are several existing access points into the site from Sharston Road, Harper Road and Longley Lane.

Proposed: -

- Vehicular access to the site is to be made by widening two existing access points from Sharston Road.
- A vehicular access from Harper Road is to be retained and reconfigured for access to the Unit 1 Car Park.
- Access arrangement drawings (Option 11 & Option 12) have been provided.
- Drawing No. SWE-KP-SHAR-011 P03-001 Option 11 demonstrates the proposed access arrangement including pedestrian refuge islands and HGV swept paths.
- Drawing No. SWE-KP-SHAR-012 P03-001 Option 12 demonstrates the proposed access arrangement without pedestrian refuge islands with narrowing of accesses and HGV swept paths.
- MCC's Statutory Approvals Team have been consulted on the access arrangement designs.
- It is requested that a pedestrian island is implemented at this location.
- The refuge island is essential to provide the necessary infrastructure for the safe crossing of the public, particularly given the distance from the junction, which can present challenges for highway users with visual or physical impairments. Additionally, it facilitates the movement (access & egress) of HGVs minimising overrun and lane overhang.
- Finalised access arrangement design should demonstrate no areas of vehicle overrun or lane overhang.
- A vehicular visibility splay will be required for the proposed accesses off Sharston Road and Harper Road in accordance with standards contained in Manual for Streets.
- Redundant access points from Sharston Road, Harper Road and Longley Lane are to be reinstated as continuous footway.
- Tactile paving and dropped kerbs should be provided at the site accesses.
- Pedestrian routes should be provided within the site and be a minimum of 1.8m in width. Dimensions should be included with any submitted drawings.
- It should be ensured that 2.0m footway is retained around the site boundary and renewed.

Vehicle Parking:

- The proposed site is to provide 90no. car parking spaces including 9no. disabled bays.
- The above provision exceeds the maximum standards for B8 (1 space per 100sqm) use based on MCC's Core Strategy. However, this is a provision of approximately 48% for B2 Land use (1 space per 45sqm) based on MCC's Core Strategy.
- Further justification for the proposed parking levels is required with regard to the worst-case B2/B8 development scenario.
- 5% of the total car parking capacity should be disabled parking bays.
- 4no. motorcycle parking spaces are to be provided – This is acceptable in principle.
- Parking bays should in alignment with MCC's parking dimensions:
- Standard parking bays minimum 2.4m x 4.8m; and
- Disabled parking bays minimum 3.6m x 6.0m
- A minimum 6-metre aisle width should be provided to allow vehicles to safely manoeuvre within the car parks with formal demarcation of all spaces.
- Dimensions of car parking spaces and aisle width should be provided in any drawings submitted.
- A car swept-path assessments will be required for the car parking areas, particularly end-of-aisle bays.

TRO Review:

- Highways request that a review of Traffic Regulation Orders on the surrounding streets in the vicinity of the development is undertaken.
- TROs will be required at the site access points to maintain vehicular visibility and allow for HGV access and egress.
- Any changes in TROs are to be done via a S278 agreement and to be funded by the applicant.

Off-Site Highways Work – S278:

- A S278 agreement will be required for any highway works which impact the adopted highway – a deposit is required to begin the S278 application, additional costs will be payable and are to be agreed with S278 Statutory Approvals team.
- The minimum standard S278 technical approval timescale is between 4-6 months and, if TRO's are included, can take 12 months so please programme this into your timetable.

Bus Stop Relocation:

- Highways are awaiting further information from TfGM's Bus Shelters Team regarding the relocation of the bus stops on Sharston Road. This will be forwarded upon receipt.
- The applicant is welcome to contact TfGM's Bus Shelters Team directly via email: shelters@tfgm.com.

EV:

- A minimum of 1 EV charge point per 1000m2 floor space/1ha site should be provided. The minimum charging unit is 7kW.

Cycle Parking:

- Details of cycle parking provision should be provided in the TS.
- Worst-case land-use scenario cycle parking numbers will be required in alignment with MCC's Core Strategy guidance.
- Cycle parking should be secure and sheltered.
- Cycle parking provision will need to be monitored as part of the Travel Plan.

Operations & Servicing:

- Service yards are to be provided within the site.
- Highways request that swept path assessments of an articulated HGVs are provided which demonstrates:
- HGVs accessing and egressing at the proposed site access-junction in a forward gear;
- HGVs travelling along the internal service road; and
- HGVs accessing each service yard within the site.
- Internal signage is required at the site illustrating Left-only exit onto Sharston Road.
- A Servicing Management Strategy should be submitted including detailed routing information for delivery/servicing vehicles accessing and egressing the proposed site.
- All HGV movements must be routed via the M56 Junction 2 (Sharston Interchange), with entry into the site from Sharston Road and a left-turn-only exit back towards the M56.

Boundary Treatment:

- All fencing / railings which fall within the site access or internal visibility-splay envelopes will need to be visually permeable from a distance of 600mm upwards.

- It is advised that all gated accesses will need to provide inward opening gates to ensure they do not impact on the adopted footway or highway.

Travel Plan:

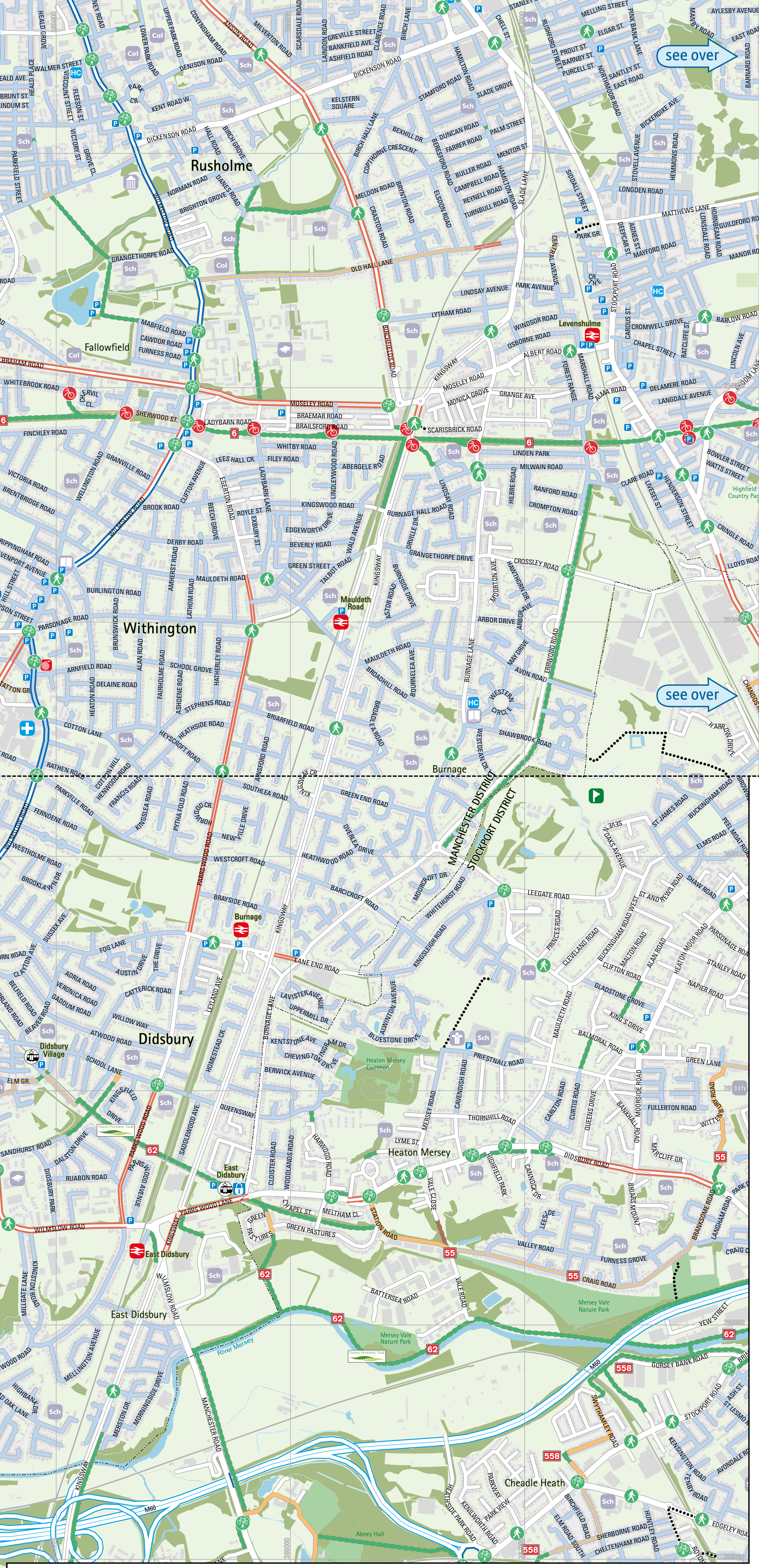
- A Framework/Interim Travel Plan should be provided as part of the planning submission.

CMP:

- A detailed Construction & Demolition Management Plan will be required prior to any construction works – to be conditioned with any approval.

Appendix B – Cycle Map





Why cycle?

To save money
Cycling costs 85% less than driving.

To save time
For journeys from 3 to 5 km cycling is often the quickest form of transport.

For health and fitness
Cycling helps to reduce high blood pressure and your chance of having a stroke.

For enjoyment
Cycling is an easy and enjoyable activity with friends and family.

For the environment
Cycling produces virtually no atmospheric pollution or noise.

Cycle Training

Whatever your level, we can help you get the best from riding your bike. We offer a range of courses across Greater Manchester, led by expert instructors to get you up-to-speed whether that be learning to ride, building skills and confidence, looking after your bike or becoming a ride leader.

Visit the website **beenetwork.com/cycle-training** to find out more.

Please note that this mapping shows location and type of infrastructure. It is not an indication of any particular standard of infrastructure, or for whom the infrastructure may be suitable (beginner cyclist, experienced cyclist etc). In Greater Manchester we have now adopted a clear standard of route provision for which all new active travel infrastructure in GM must comply, as articulated through our Design Guide. This standard is intended that it is suitable for an unaccompanied 12 year old, following completion of level 2 Bikeability, which is offered in most Greater Manchester schools during Year 6. Future versions of this mapping, to be published during 2023, will include an indication of where infrastructure comes up to this adopted standard.

Useful Contacts

For public transport information
0161 244 1000
7am – 8pm Monday to Friday
8am – 8pm Saturday, Sunday & public holidays.
beenetwork.com

For cycling Information

British Cycling
The governing body for cycle sport in the UK.
britishcycling.org.uk

Cycling UK
The national cycling charity.
cyclinguk.org

Trans Pennine Trail
A multi-user route, coast-to-coast across the north of England.
transpenninetrail.org.uk

Canal and River Trust
The charity entrusted with the care of 2000 miles of inland waterway network in England.
canalrivertrust.org.uk

Sustrans
The charity enabling people to travel on foot, by bike or public transport for more everyday journeys.
sustrans.org.uk

To find our more information about cycling, including courses, guides and other routes, visit:
beenetwork.com/cycling

Highway defects

To report potholes or any other surface problems that are a hazard to cyclists please contact your Local Highway Authority
0161 234 5000 / contact@manchester.gov.uk

October 2024

Map 8 of 10 covering all of Greater Manchester



Cycle map

Manchester

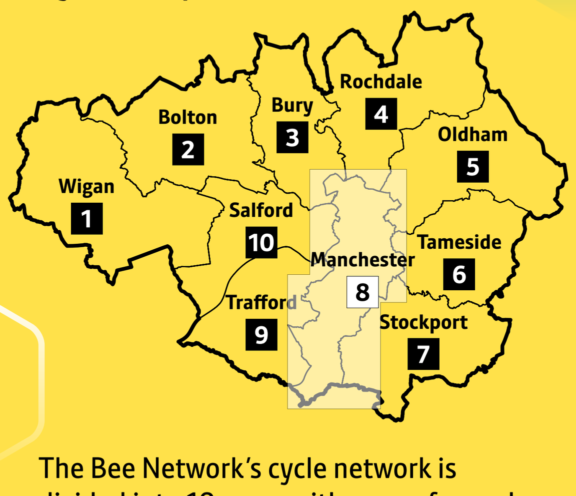
City centre, Chorlton, Didsbury, Harpurhey, Hulme, Northenden

MAP 8

BEE NETWORK

BEE NETWORK

Cycle maps



The Bee Network's cycle network is divided into 10 areas with a map for each.

All maps are available to download from **beenetwork.com/cycling** or by scanning the QR code. You can also pick them up from your local Information and Ticket office.

Map 8: Manchester

- Traffic Free Route - good surface
- Traffic Free Route - rough surface
- On Road Route - with physical segregation
- On Road Route - with other cycling facilities
- On Road Route - signposted but no facilities
- On Road Route - advisory/suggested
- 20 mph speed limit
- Footpath
- Pedestrian Crossing
- Toucan Crossing
- Cycle Hub
- Cycle Parking
- Rail Station
- Metrolink Stop
- Cycle Access Point
- National Cycle Network (NCN) - National and Regional
- Library
- Museum / Art Gallery
- School
- College
- University
- Leisure Centre / Sports
- Theatre
- Hospital
- Health Centre
- Fire Station
- Tourist Information Centre

Walking time: 0 1 2 3 4 5 6 7 8 9 10 minutes / 0 50 calories

Cycling time: 0 1 2 3minutes / 0 30 calories

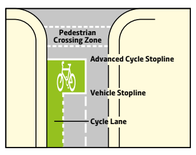
Scale 1:16,000: 0 200m 400m 600m 800m 1km / 0 1/4 mile 1/2 mile

N

Every care has been taken to ensure that the information given on these maps is correct as at June 2016. Contains Ordnance Survey data. © Crown copyright and database right 2016.

Road signs

- Route for cycles only
- Route shared with pedestrians (no separation)
- Route shared with pedestrians (cycle track & footpath are separate)
- Mandatory cycle lane (motor vehicles must not enter the lane during hours of operation)
- Advisory cycle lane (motor vehicles should not enter this lane unless it is unavoidable)
- Bus and cycle lane
- Tram and cycles only
- Marton 3 — Directions on recommended route
- 60 — National Cycle Network (NCN) Route number
- 80 — National Cycle Network Regional Route number
- Cycle parking
- No motor vehicles (cycling permitted)
- No cycling



Advanced stop lines

Contains Ordnance Survey data © Crown copyright and database right 2016.

The information shown on this map has been collated from a number of different sources by Transport for Greater Manchester and cannot be guaranteed to be fully correct.

see over

Appendix C – Site Plan

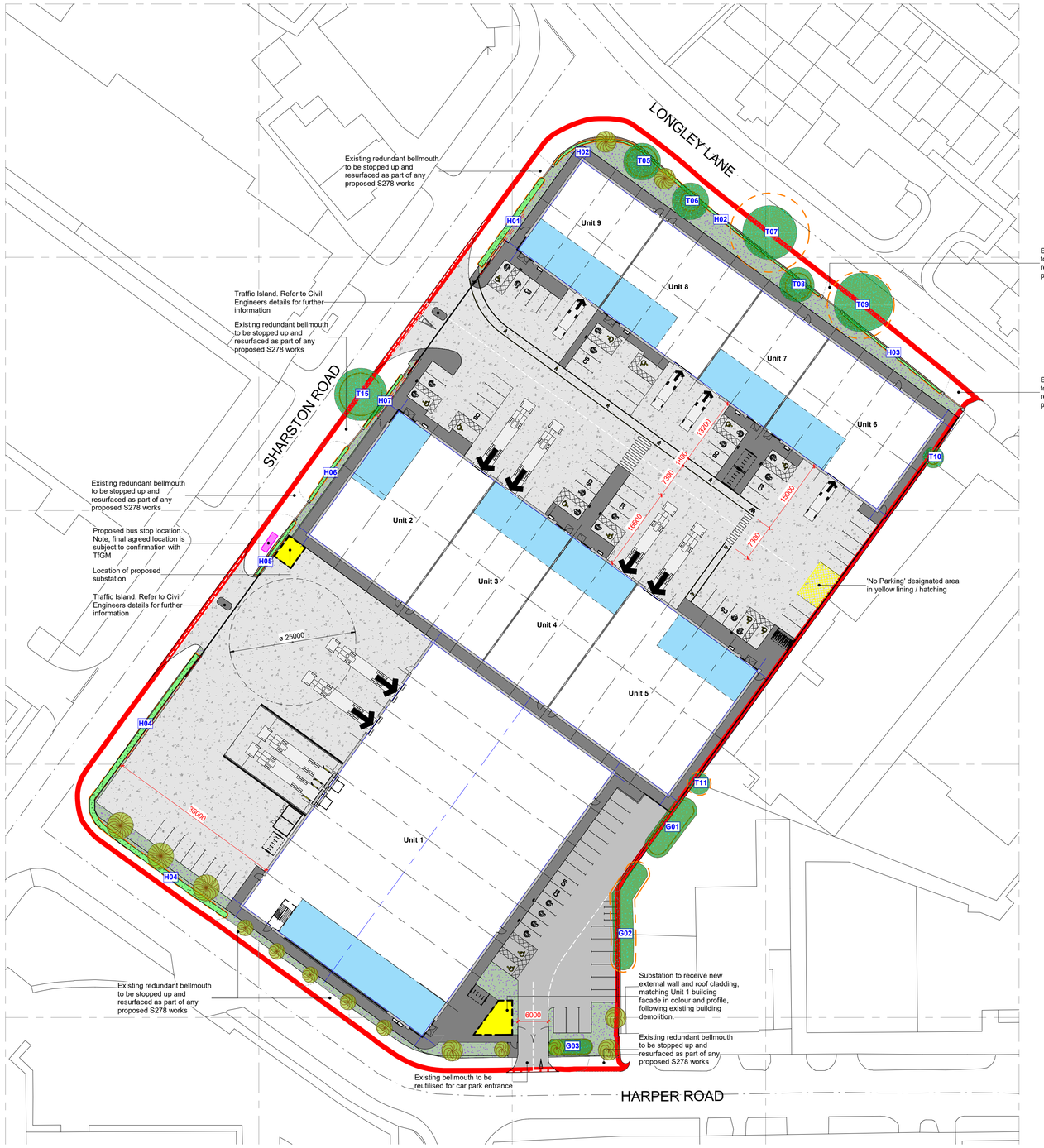
0m 10m 20m 30m 40m

VISUAL SCALE 1:500 @ A1

N

05-XX_Site Finishes Key

- Proposed Planning boundary
- Reinforced concrete service yard inc. dock ramp. Refer to Civil Engineers details for construction / sub-base build ups
- Tarmacadam surface to vehicular access road. Refer to Civil Engineers details for construction / sub-base build ups
- Traffic Island. Refer to Civil Engineers details for further information
- Proposed areas of soft landscaping (trees / planting / hedgerows) in accordance with Landscape Architect details
- T01 — Extent of existing trees and root protection zones (dashed orange) in accordance with Arboricultural Survey to BS5837:2012. Reference number as outlined in tree survey
- G01 — Extent of existing groups of trees/planting with root protection zones (dashed orange) in accordance with Arboricultural Survey to BS5837:2012. Reference number as outlined in tree survey
- H01 — Extent of existing hedgerows with root protection zones (dashed orange) in accordance with Arboricultural Survey to BS5837:2012. Reference number as outlined in tree survey
- New trees in accordance with Landscape Architects details
- Extent of first floor accommodation space to each unit (office & core)



1 **05-ZZ_Site Plan as Proposed**
1 : 500

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92-XX_Gross Internal Area (GIA)

Name	Area Metric	Area Imperial
Unit 1		
Warehouse	2,790 m²	30,032 ft²
First Floor	279 m²	3,003 ft²
	3,069 m²	33,035 ft²
Unit 2		
Warehouse	698 m²	7,513 ft²
First Floor	125 m²	1,345 ft²
	823 m²	8,859 ft²
Unit 3		
Warehouse	558 m²	6,006 ft²
First Floor	139.5 m²	1,502 ft²
	697.5 m²	7,508 ft²
Unit 4		
Warehouse	465 m²	5,005 ft²
First Floor	116.3 m²	1,251 ft²
	581.3 m²	6,257 ft²
Unit 5		
Warehouse	871 m²	9,375 ft²
First Floor	142 m²	1,528 ft²
	1,013 m²	10,904 ft²
Unit 6		
Warehouse	585.6 m²	6,303 ft²
First Floor	104.4 m²	1,124 ft²
	690 m²	7,427 ft²
Unit 7		
Warehouse	343.5 m²	3,698 ft²
First Floor	119.8 m²	1,290 ft²
	463.3 m²	4,987 ft²
Unit 8		
Warehouse	510 m²	5,490 ft²
First Floor	99.2 m²	1,068 ft²
	609.3 m²	6,558 ft²
Unit 9		
Warehouse	419 m²	4,510 ft²
First Floor	146.2 m²	1,573 ft²
	565.2 m²	6,083 ft²
Total:	8,511.5 m²	91,617 ft²

92-XX_Gross External Area (GEA)

Name	Area Metric	Area Imperial
Unit 1		
Ground Floor	2,899 m²	31,205 ft²
First Floor	314 m²	3,379 ft²
	3,213 m²	34,584 ft²
Unit 2		
Ground Floor	741 m²	7,977 ft²
First Floor	145 m²	1,558 ft²
	886 m²	9,535 ft²
Unit 3		
Ground Floor	585 m²	6,300 ft²
First Floor	157 m²	1,687 ft²
	742 m²	7,987 ft²
Unit 4		
Ground Floor	489 m²	5,265 ft²
First Floor	131 m²	1,410 ft²
	620 m²	6,675 ft²
Unit 5		
Ground Floor	920 m²	9,901 ft²
First Floor	164 m²	1,763 ft²
	1,084 m²	11,664 ft²
Unit 6		
Ground Floor	627 m²	6,751 ft²
First Floor	119 m²	1,283 ft²
	746 m²	8,034 ft²
Unit 7		
Ground Floor	366 m²	3,938 ft²
First Floor	135 m²	1,453 ft²
	501 m²	5,391 ft²
Unit 8		
Ground Floor	540 m²	5,813 ft²
First Floor	113 m²	1,221 ft²
	653 m²	7,034 ft²
Unit 9		
Ground Floor	453 m²	4,875 ft²
First Floor	167 m²	1,798 ft²
	620 m²	6,674 ft²
Total:	9,065 m²	97,577 ft²

Parking Schedule

Description	Count
Unit 1	
Standard car parking bay	25
Standard car sharing parking bay	2
Standard electric vehicle charging parking bay	4
Accessible car parking bay	2
Motorcycle bay	4
	37
Unit 2	
Standard car parking bay	4
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible car parking bay	1
Accessible electric vehicle parking bay	1
	8
Unit 3	
Standard car parking bay	2
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible electric vehicle parking bay	1
	5
Unit 4	
Standard car parking bay	2
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible electric vehicle parking bay	1
	5
Unit 5	
Standard car parking bay	5
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible car parking bay	1
Accessible electric vehicle parking bay	1
	9
Unit 6	
Standard car parking bay	6
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible electric vehicle parking bay	1
	9
Unit 7	
Standard car parking bay	1
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible electric vehicle parking bay	1
	4
Unit 8	
Standard car parking bay	4
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible car parking bay	1
Accessible electric vehicle parking bay	1
	8
Unit 9	
Standard car parking bay	2
Standard car sharing parking bay	1
Standard electric vehicle charging parking bay	1
Accessible electric vehicle parking bay	1
	5
Total: 90	90

Bicycle Provision

Count
Unit 1
18
Unit 2-5
20
Unit 6
6
Unit 7
4
Unit 8
6
Unit 9
4
58

Rev	Revision Details	Drawn	Date	Chck'd
P06	Issued in support of full Planning Application	PM	30.07.25	BB
P05	Final draft issue for approval prior to formal Planning issue	PM	25.07.25	BB
WIP5	Issued for information. General updates.	AD	15.07.25	AD
WIP4	Issued for information. General updates. Cycle and waste provisions added	PM	24.06.25	BB
WIP3	Unit 2 & 3 Office areas updated. Unit 3 parking configuration updated to suit accommodation provision.	PM	04.06.25	BB
WIP2	Pedestrian walk way relocated to increase the yard area & traffic islands added.	AD	20.05.25	BB
WIP1	Unit 3 Areas updated in line with agents comments. Associated parking provision and configuration updated to suit	PM	19.05.25	BB
P04	Parking provision and designation of spaces updated. Existing trees to be removed ommitted for this issue.	PM	13.05.25	ME
P03	Dock ramp retaining wall reduced. Unit 2 moved to increase Unit 3 yard depth and incorporate safe pedestrian route. Trees to be removed indicated	PM	06.05.25	ME
P02	Updated to incorporate comments received. Unit 2 location moved to increase Unit 3 yard depth. General updates to finishes	PM	25.04.25	ME
P01	Issued for information purposes	PM	16.04.25	ME

Project No. **25006**
Suitability **A APPROVED FOR STAGE 3**
Status **Planning**

Client:
Kier Sharston Ltd

Project:
Sharston Industrial Estate
Sharston Road,
Wythenshawe,
Manchester

Sheet Name:
Site Plan as Proposed

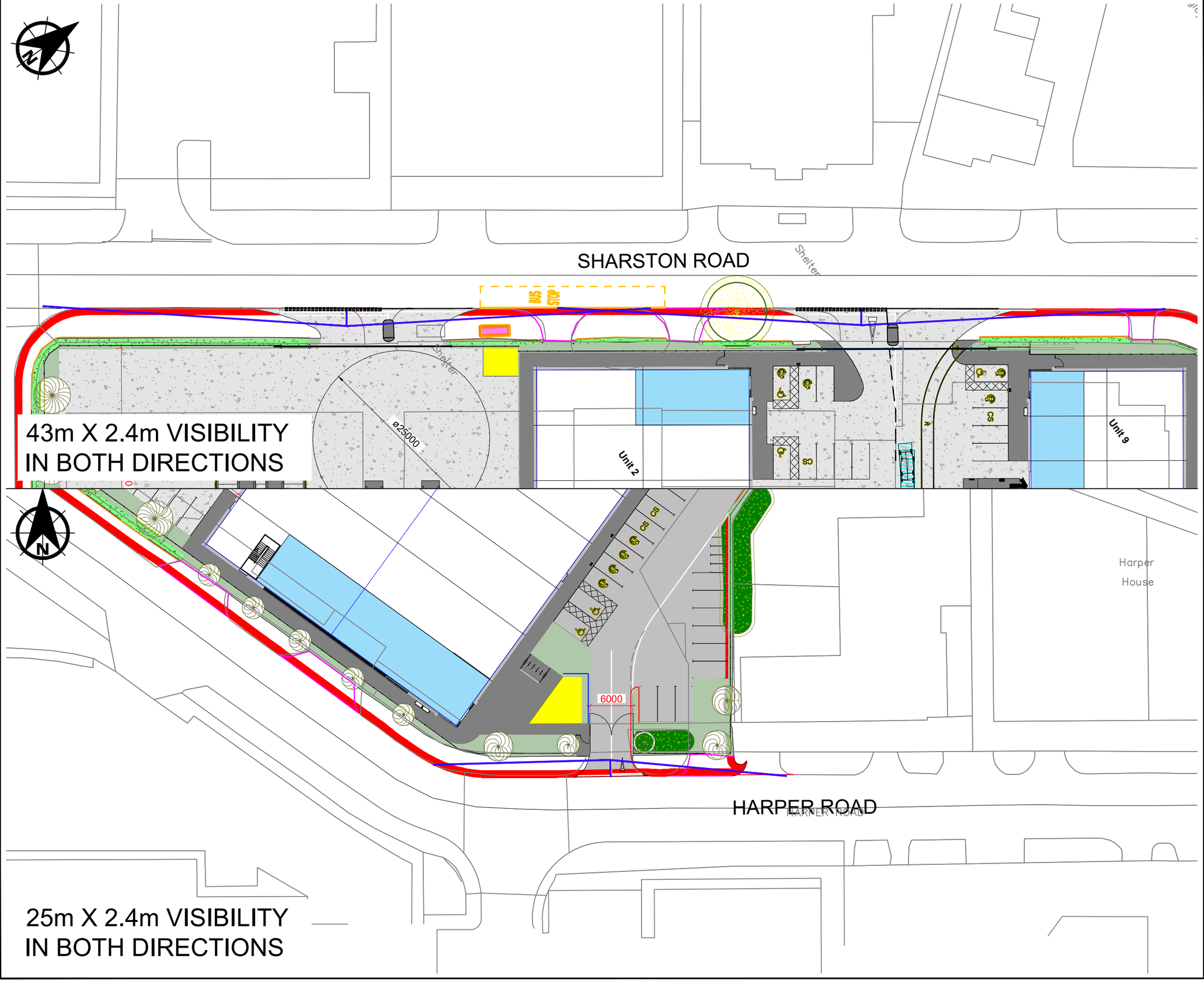
Drawing No. **25006-HFR-AV-XX-DR-A-0501** Rev. **P06**
Drawn By **PM** Scale **As indicated @ A1**
Created **16.04.25**

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Appendix D – Junction Visibility Splays



NOTES

1. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT INFORMATION.
3. ALL DATUM LEVELS ARE IN METRES AND DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P01	17.06.2025	FIRST ISSUE	DM	IB	IB
P02	22.07.2025	UPDATE LAYOUT	JF	IB	IB

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SWECO

Client

KIER PROPERTY LTD

Project Title

SHARSTON ROAD TRADE CITY

Drawing Title

SITE ACCESS - VISIBILITY SPLAYS

Purpose Of Issue

PRELIMINARY

Status	Status Description
S0	INITIAL STATUS OR WIP

Drawn	Designed	Checked	Approved
JF	DM	IB	IB

Sheet Size	Scale	Sweco Ref	Revision
A3	1:500	65215652	P02

Drawing Number

65215652-SWE-XX-XX-D-TP-0001-02

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Appendix E – Road Safety Audit Stage 1

REPORT

65215652
SHARSTON INDUSTRIAL ESTATE, SHARSTON ROAD
STAGE 1 ROAD SAFETY AUDIT



P02

65215652-SWE-GEN-ZZ-AS-PC-00001

01 August 2025

Prepared by
SWECO UK LIMITED
GROVE HOUSE, MANSION GATE DRIVE
LEEDS
LS7 4DN

On behalf of
MANCHESTER CITY COUNCIL
TOWN HALL
ALBERT SQUARE
M2 5DB

Change list

VER.	DATE	STATUS	REVIEWED	APPROVED
P02	01/08/2025	REPORT TEXT AMENDED TO CLARIFY JUNCTION LAYOUTS	PDUNCANSON	ARUSS
P01	24/07/2025	SIGNED ISSUE	MMAGYAR	PDUNCANSON

Project Details

Report Title	SHARSTON INDUSTRIAL ESTATE, SHARSTON ROAD STAGE 1 ROAD SAFETY AUDIT
Date	Friday, August 1, 2025
Document Reference	65215652-SWE-GEN-ZZ-AS-PC-00001
Revision	P02
Prepared by	SWECO (LEEDS)
On behalf of	MANCHESTER CITY COUNCIL

Key personnel

Client	**Overseeing Organisation**
Kier Sharston Ltd *Contact: Oli Butler* oliver.butler@kier.co.uk	Highway Development Control Team Manager Highways Service, Neighbourhoods Directorate 5th Floor Bridgewater House Whitworth Street Manchester M1 6LT *Contact: Rebecca Hesketh* rebecca.hesketh@manchester.gov.uk

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Sweco UK Limited

Author: Andrew Russ

Telephone (0113) 262 0000

Email: Andrew.russ@sweco.co.uk

Designer	**Road Safety Audit Team**
Fletcher Rae Level 12, Tower 12, 18-22 Bridge Street Manchester M3 3BZ Sweco UK Ltd 1 New York Street Manchester M1 4HN	Sweco UK Ltd Grove House Mansion Gate Drive Leeds, LS7 4DN *Contact: Andrew Russ*
Police *(only required for Stage 3)*	**Maintaining Agent *(only required for Stage 3)***
N/A	N/A

Table of contents

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1.2	Road Safety Audit Report	5
1.3	Road Safety Audit Team	5
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3	**Items raised at this Stage 1 road safety audit.**	**9**
4	**Audit team statement**	**15**
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1 Introduction

1.1 Scheme Description

The scheme site is located within the Sharston Industrial Estate in Sharston, Manchester, and is bounded by Longley Lane, Sharston Road and Harper Road. The scheme proposes to redevelop the former Siemens factory site and the proposals include the closure of existing bellmouth accesses on all three boundary streets and the creation of three vehicular access points (two on Sharston Road and one on Harper Road). The closed accesses are to be raised to the same level as the surrounding footway, with the existing dropped kerbs removed.

1.2 Road Safety Audit Report

This report results from a Stage 1 Road Safety Audit carried out on the Scheme proposed by Kier Sharston Ltd and designed by Fletcher Rae / Sweco, at the request of the overseeing organisation, Manchester City Council. The Road Safety Audit was carried out during July 2025.

This Stage 1 audit only covers the parts of the scheme that interface with the public highway.

1.3 Road Safety Audit Team

The Road Safety Audit Team membership, approved by Sweco, was as follows:

Team Leader	Andrew Russ
Team Member	Martin Magyar

1.4 Road Safety Audit Brief

A Road Safety Audit Brief was provided to the audit team, together with accompanying documents which are listed in Appendix A.

1.5 Terms of Reference

The terms of reference of the audit are as described in GG 119 Rev.2. The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits.

1.6 Road Safety Audit

The desk-based review of the scheme drawings of the Road Safety Audit took place at the Leeds office of Sweco Ltd on Thursday, 03 July 2025, with the site visit taking place on Friday, 04 July 2025 .

The scheme has been examined and this report compiled only regarding the safety implications for road users of the scheme as presented. It has not been examined or

verified for compliance with any other Standards or criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG 119, and in no way, imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

All comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan supplied with the Road Safety Audit Brief in Appendix B.

1.7 Site Visit

The site was visited by all Road Safety Audit Team members as detailed below:

Day/Date	Time from	Time to	Light Conditions	Weather	Surface	Traffic
Friday, 04 July 2025	11:15	12:40	Daylight	Fine	Dry	**Motor** Moderate **Cyclist** Light **Pedestrian** Light

Notes:

- *Harper Road was observed to be heavily used by parked vehicles during the site visit.*
- *4 cyclists were observed using the surrounding road network during the site visit*
- *A significant number of buses were observed on Sharston Road.*

2 Items raised at previous road safety audits

There have been no previous road safety audits for this scheme.

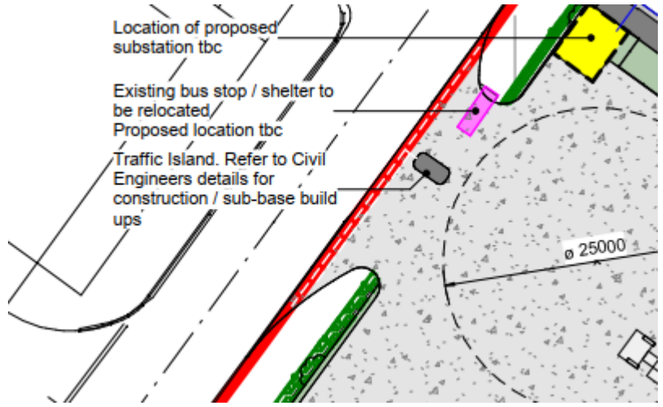
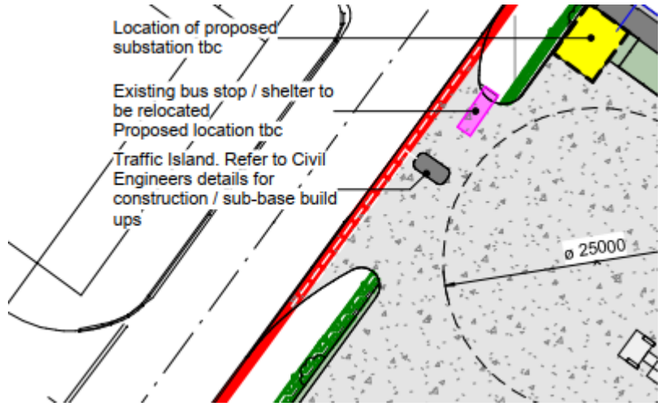
3 Items raised at this Stage 1 road safety audit

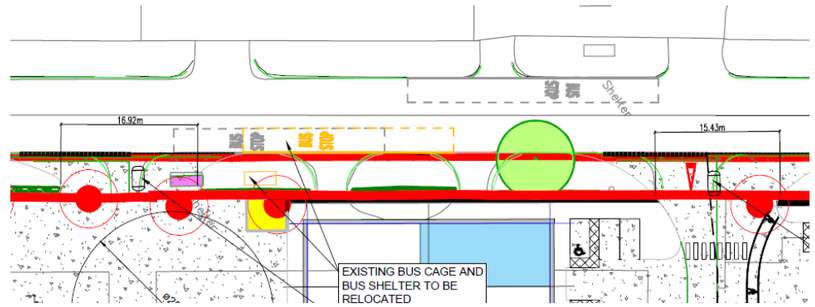
Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.1.	Existing site entrances, scheme wide.	Pedestrian slips, trips and falls.	The existing, redundant entrances to the site on Longley Lane, Sharston Road, and Harper Road are to be closed, with the access cross overs raised to the same level as the surrounding footways. However, it was observed that the existing footways are uneven, and this may result in uneven tie-ins between existing and new footway construction. This could lead to pedestrian trips and falls.	Ensure that the tie-ins between existing footways and new footway construction at the closed accesses provide an even surface, with smooth transitions.	 *Existing access on Longley Lane*

Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.2	Site entrances, scheme wide.	Vehicle to vehicle side-swipe collisions.	Parked cars were observed along the site frontages on Sharston Road and Harper Road and this included parking in close proximity to the entrances for existing businesses. It is likely that demand for on-street parking will continue in the area and that drivers will park their vehicles close to the proposed scheme entrances. This could restrict intervisibility between drivers exiting the site and drivers on the road, leading to collisions. On Harper Road this problem is further exacerbated by limited visibility to the west due to the highway alignment.	It is, acknowledged that the parked vehicles have some beneficial effect in helping to reduce traffic speeds on the side roads. Therefore, it is recommended that parking restrictions are introduced adjacent to the proposed site entrances, where improved visibility will aid exiting drivers, whilst still retaining the majority of on-street parking as a speed reducing measure.	 *Vehicles parked on Sharston Road*
3.3	Footway, Harper Road.	Vehicles collide with pedestrians.	Cars parked partially on the footway were observed on both sides of Harper Road. With the development of the scheme site increased pedestrian footfall on the Harper Road footway can be expected. This could increase the risk of pedestrians being struck by vehicles pulling onto and off the footway to park.	Discourage footway parking through physical means, such as street furniture placed near the kerb edge.	 *Vehicles parked on Harper Road*

Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.4	Footways on Sharston Road and Longley Lane.	Pedestrian slips, trips and falls.	There is a large tree located within the footway of Sharston Road and another two large trees located in the footway of Longley Lane. These trees are distorting the footways surrounding them, creating a potential trip hazard for pedestrians. Whilst it is acknowledged that the footways are wide and there remains sufficient space for pedestrians to pass the trees, the problem could be a particular hazard for partially-sighted pedestrians.	Provide some form of physical guidance to guide pedestrians away from the footway areas immediately surrounding the trees.	 *Footway on Sharston Road*

Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.5	Footways, scheme wide.	Pedestrian slips, trips and falls.	The existing footway is in a poor state of repair in many places around the scheme site. This represents a trip hazard to pedestrians and the situation will be exacerbated in the future with the opening of the new scheme and the increased footfall it will generate.	Resurface the footway, where required, to remove trip hazards.	 *Footway on Longley Lane*  *Footway on Sharston Road*

Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.6	Sharston Road.	Pedestrian trips or is struck by motor vehicles.	It is proposed to place new refuge islands in the two proposed site accesses. However, the exact sizes of the proposed islands in the accesses are unknown. Islands which are too small may endanger pedestrians, people who use wheelchairs or other mobility aids and parents with pushchairs, providing insufficient protection from motor vehicles entering and exiting the site. This may lead to them being hit by motor vehicles using the site.	Ensure that the new refuge islands are of sufficient size to safely accommodate users other than single pedestrians.	 *Extract from drg. no. 25006-HFR-AV-XX-DR-A-0501*
3.7	Sharston Road and Harper Road.	Pedestrians struck by motor vehicles.	From the drawings provided, it appears that no separate pedestrian accesses will be provided into the site from the surrounding footway and that pedestrians will need to walk within the vehicular accesses. This could lead to pedestrians being struck by motor vehicles entering or leaving the site.	Provide safe means of access to the site for pedestrians.	 *Extract from drg. no. 25006-HFR-AV-XX-DR-A-0501*

Reference	Location	Type of collision	Description	Recommendation	Photographs / Plans
3.8	Sharston Road.	Side-swipes.	The existing bus stop on the eastern side of Sharston Road is to be relocated to a position further north. This will mean that the bus cages on either side of the road will overlap. Whilst it is acknowledged that the cages are of a generous length and unlikely to be fully utilised, the road was observed to be a busy bus route and buses stopped at random within the bus cages rather than consistently at the front. (see photograph to the right). This could increase the risk of side-swipe collisions as general traffic tries to overtake stopped buses.	Design the bus cages such that they do not overlap.	 *Extract from drg. no. 65215652-SWE-XX-XX-D-X-0001-01*  *Bus stopped in northbound bus cage*

4 Audit team statement

We certify that this Road Safety Audit has been carried out in accordance with GG119 Revision 2.

Road Safety Audit Team Leader

Name	Andrew Russ
Signed	
Qualification	EngTech MCIHT MSoRSA Certificate of Competence
Position	Senior Engineer
Date:	01/08/2025

Road Safety Audit Team Member

Name	Martin Magyar
Signed	
Qualification	BEng, MSc (Eng), CEng MICE, MSoRSA Certificate of Competence
Position	Principal Engineer
Date:	01/08/2025

Appendix A – Documents forming the audit Brief

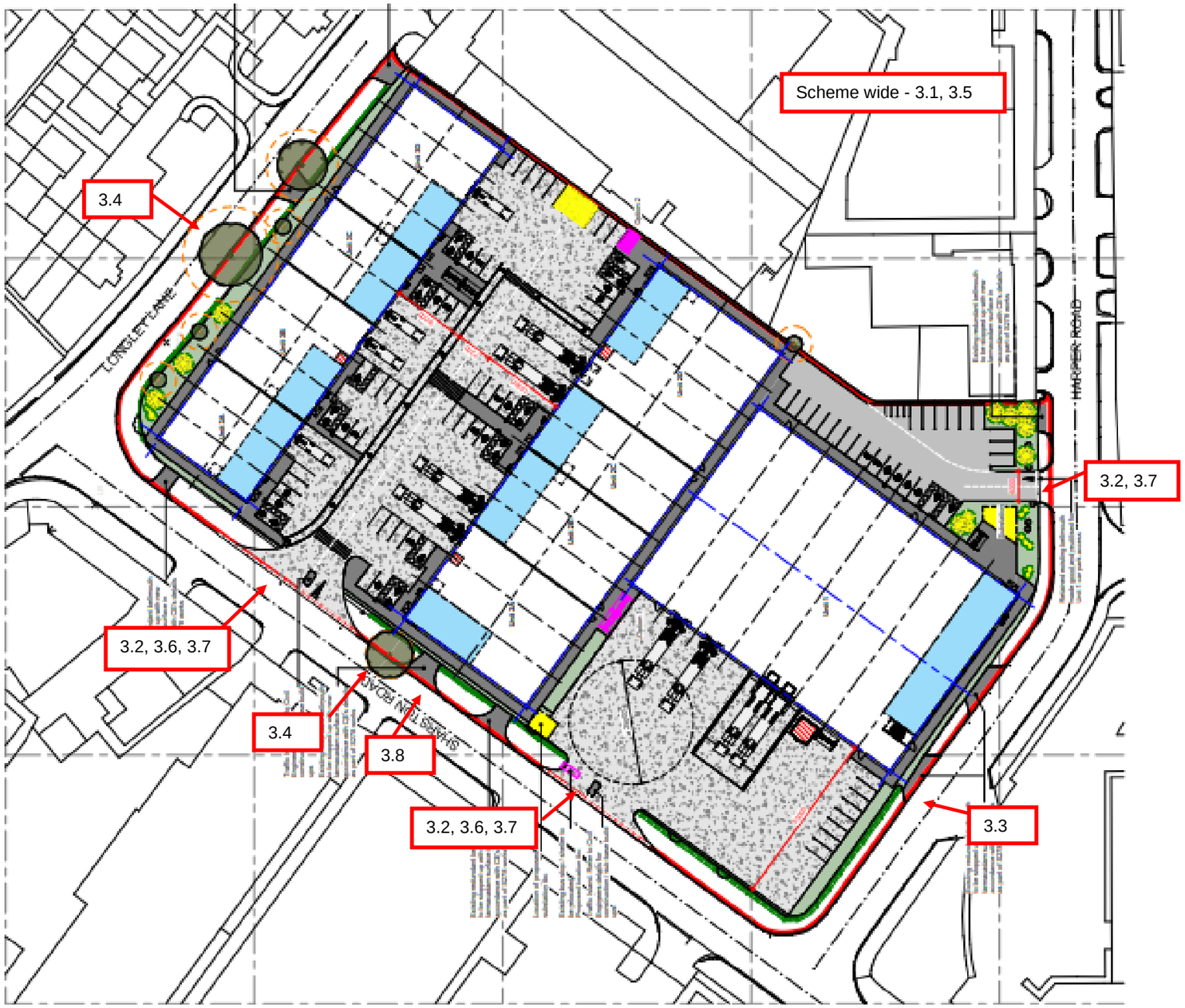
Documents

Ref	Title	Date
Sharston - RSA 1 Brief - 24Jun25	Road Safety Audit Brief	02/07/25

Drawings

Drawing Number	Title
25—6-HFR-AV-XX-DR-A-0501	Site Plan as Proposed
65215652-SWE-XX-XX-D-X-0001-01	Site Access Arrangements
65215652-SWE-XX-XX-D-X-0001-03	Site Access and Internal Site Layout – Swept Path Analysis (Sheet 1)

Appendix B – Annotated scheme drawing



REPORT
01 AUGUST 2025
P02
65215652-SWE-GEN-ZZ-AS-PC-00001

2025 08 01

TRADE CITY, SHARSTON

STAGE 1 ROAD SAFETY AUDIT – DESIGNERS RESPONSE

Author: Ian Bullard
Project Number: 65215652
Project Name: Trade City Sharston
Client: Kier Sharston Ltd

1 Introduction

This Technical Note has been prepared by Sweco on behalf of Kier Sharston Limited (the 'Applicant'), to provide a Designers Response to the Stage 1 Road Safety Audit (RSA) dated 24th July 2025 (document reference 65215652-SWE-GEN-ZZ-AS-PC-00001 revP02).

The RSA was undertaken, at the request of Manchester City Council (MCC) as the Local Highway Authority, to assess the design of the site access proposals and amendments within the public highway, identified as part of the proposed Trade City development on Sharston Road, Wythenshawe.

This Designers Response is intended to be read in conjunction with the RSA report, as referenced above, and presents a response to each item raised within Section 3 of the RSA, point by point.

It is important to note that the RSA is based on a proposed site plan which was current at the date of the audit, (as included in the RSA report), and has since evolved. The site layout submitted for planning is included within the Transport Assessment (TA) as Appendix C, and the RSA is included as Appendix E.

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2 Designers Responses

The following section presents a summary of the identified items presented within Section 3 of the RSA report and the associated auditor's recommendation to each item. For each item, a Designers Response has been provided.

Item 3.1. – Existing site entrances (scheme wide)

Summary: Existing accesses not required for future development access are to be closed and footways reinstated. Existing footway levels may result in uneven tie-in details.

Recommendation: Ensure that the tie-ins between existing footways and new footway construction at the closed accesses provide an even surface, with smooth transitions.

Designers Response: The closure of the existing access points will be undertaken as part of a S278 Agreement with details of works within the highway to be agreed with MCC as the Local Highway Authority.

The proposals comprise reverting unused private vehicular access points to pedestrian use within the existing extent of the adopted highway boundary.

As part of the S278 process for agreement of works in the highway, civil design details will be provided for agreement with MCC and include plans presenting the existing and finished levels, kerb details and details of excavation and final construction make up. This process will ensure that the finished footway detail is to a standard acceptable to MCC.

Item 3.2. – Site entrances (scheme wide)

Summary: Parked cars were observed on Sharston Road and Harper Road, in close proximity to the site entrances, which could restrict intervisibility between drivers leaving the site and drivers on the road.

Recommendation: It is acknowledged that the parked vehicles have some beneficial effect in helping to reduce traffic speeds on the side roads. Therefore, it is recommended that parking restrictions are introduced adjacent to the new entrances, where improved visibility will aid exiting drivers, whilst still retaining the majority of on-street parking as a speed reducing measure.

Designers Response: In order to ensure highway visibility is maintained, and to facilitate safe access and egress, it is proposed that the existing TROs on Sharston Road and Harper Road are amended at each retained access to comprise 'No Waiting At Any Time' restrictions (double yellow lines).

It is understood that the identified TROs will be progressed as part of the S278 Agreement, at the cost of the Applicant, following receipt of planning consent.

Item 3.3. – Footway, Harper Road

Summary: Cars were observed parked partially on the footway on both sides of Harper Road. The development may increase pedestrian footfall and therefore the risk of pedestrians being struck by parking vehicles may be raised.

Recommendation: Discourage footway parking through physical means, such as street furniture placed near the kerb edge.

Designers Response: The redevelopment of the site will result a net reduction in floor area of 31% and traffic generation, including walking trips, from the site can be anticipated to reduce by a similar percentage.

Table 5.4 of the Transport Assessment presents the multi modal people trips expected at the site in the AM and PM peak hours. For pedestrians, this is identified as 7% of all people trips made to the site, which equates to 5 walking trips in the AM hour and 4 walking trips in the PM hour.

With the removal of existing redundant vehicular access points and the overall reduction in walking trips as a result of the smaller redevelopment proposals, the risk of pedestrians being struck by manoeuvring vehicles is anticipated to fall, not increase. No action is required.

Item 3.4. – Footways on Sharston Road and Longley Lane

Summary: There is a tree located within the footway on Sharston Road and two more on Longley Lane which are distorting the footway levels. Whilst the footways are wide and retain sufficient space, they could be a trip hazard for partially sighted pedestrians.

Recommendation: Provide some form of physical guidance to guide pedestrians away from the footway areas surrounding the trees.

Designers Response: Section 4.7 of the Transport Assessment presents a review of the current condition of the footways surrounding the site. Whilst it is acknowledged that there is some localised break-up of the pavement surface as a result of tree root movement, it is the opinion of the Applicant that the general overall condition of the footway does not justify such a significant level of works.

Furthermore, the LHA is presumably happy with the presence of highway trees in the footways surrounding the site and would have addressed any perceived safety issues had they arisen.

There is no recorded evidence of trips and falls, or personal injury accidents, as a result of pedestrians failing to negotiate the trees within the footways of Sharston Road and Longley Lane.

The closure of the redundant accesses and reinstatement of a continuous footway as part of the proposed development will also provide a significant pedestrian amenity improvement on the full perimeter of the site.

Whilst the risk to pedestrians from trees within footways is not zero, the proposals will improve the environment for pedestrians over that currently existing.

Item 3.5. – Footways (scheme wide)

Summary: The existing footway is in a poor state of repair in many places, which represents a trip hazard. This issue will be exacerbated by increased footfall as a result of the scheme.

Recommendation: Resurface the footway, where required, to remove trip hazards.

Designers Response: As noted in the response to item 3.4, the Transport Assessment presents a review of the current conditions of the footways surrounding the site. In addition to the issue of tree roots cracking the surface in the locations noted above, the review concludes that the surrounding footways

are in overall good order, albeit there is evidence of patchwork repair along certain parts.

Similar to the points raised in item 3.4, it is the opinion of the Applicant that the general condition of footways surrounding the site is good and does not justify such a significant level of works. Overall maintenance responsibility for the adopted highway (including footways) rests with MCC as the Local Highway Authority.

Item 3.6. – Sharston Road

Summary: The proposed refuge islands within the retained / improved site accesses are of unknown size. Small islands may endanger pedestrians, wheelchair users, other mobility aids and parents with pushchairs. The lack of sufficient protection may result in them being struck by a vehicle.

Recommendation: Ensure that the new refuge islands are of sufficient size to safely accommodate users other than single pedestrians.

Designers Response: The pedestrian refuge islands located within the bell mouths of the two improved site access junctions on Sharston Road are designed to standard dimensions with a clear 2m crossing width and 1.5m landing width, with flush kerbs and tactile paving to assist with partially sighted pedestrians.

It should also be noted that the islands are located across private accesses with limited traffic flows and not highway junctions. Additionally, the accesses will operate as simple priority junctions and vehicles will not be held and released under signal control. Therefore, under standard operation, it is expected that vehicles will wait for pedestrians to cross the full bell mouth before entering the bell mouth themselves.

Should a pedestrian, wheelchair user, or parent and pushchair, be halfway across the bell mouth, it is exceptionally unlikely that they will have both ahead and return paths blocked. In any event, the dimensions of the island are sufficient for two wheelchairs to wait and hold, side by side, clear of the vehicular paths.

Item 3.7. – Sharston Road and Harper Road

Summary: It appears that no separate pedestrian accesses will be provided into the site, requiring pedestrians to walk in the road.

Recommendation: Provide safe means of access to the site for pedestrians.

Designers Response: This is an incorrect assumption, however it is acknowledged that the plans provided to the RSA team did not clearly illustrate a continuous pedestrian route from the external footways into the site. The latest site layout plan, included within the Transport Assessment as Appendix C, now clearly shows continuous pedestrian routes into the site at the northern access on Sharston Road and the car park access on Harper Road. Pedestrians are not expected to use the southern access on Sharston Road which is provided for vehicular only access to the service yard of Unit 1.

Item 3.8. – Sharston Road

Summary: The relocation of the bus stop will result in the opposing bus cages overlapping. Buses were observed using the full extent of the bus cages which could lead to collision risk when vehicles try to overtake.

Recommendation: Design the bus cages such that they do not overlap.

Designers Response: To accommodate the improvement to the southern site access required by MCC, the southbound bus stop requires a slight realignment (approximately a 10m shift north). Although TfGM has yet to respond to the initial scoping enquiry, details of the bus stop relocation will be confirmed with TfGM and MCC as part of the S278 works. All parties will have had sight of the RSA by that point and the relocation will be cognisant of its recommendations.

The existing bus cages are of a significant length and it is not clear whether they are also timing and / or layover points. Dependent upon this it may be possible to shorten the length of one, or both, such that there is no overlap.

Furthermore, the tidal nature of bus services means that it is highly unlikely that north and southbound services will be waiting at the respective stops at the same time and if they were, it would be common sense for the drivers to use the extent of the bays such as to avoid any chance of blocking. The risk is therefore deemed to be minimal.

A number of alternative locations for the southbound stop are also available within the immediate vicinity on Sharston Road if either the realignment is deemed unsuitable, or one or both of the bus cages cannot be shortened.

Appendix F – Swept Path Analyses

SHARSTON ROAD

BUS STOP

Unit 1

Unit 2

Unit 3

Unit 4

Unit 5

Unit 6

Unit 7

Unit 8

Unit 9

Tank

35000

16500

800

13200

15000

6000

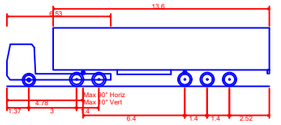
CS

122

HAF

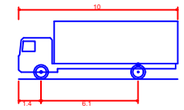
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Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P01	17.06.2025	FIRST ISSUE	DM	IB	IB
P02	22.07.2025	UPDATED LAYOUT	JF	IB	IB

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SHARSTON ROAD TRADE CITY

Drawing Title

SITE ACCESS AND INTERNAL SITE LAYOUT - SWEPT PATH ANALYSIS (SHEET 1)

Purpose Of Issue

PRELIMINARY

Status	Status Description
S0	INITIAL STATUS OR WIP

Drawn	Designed	Checked	Approved
JF	DM	IB	IB

Sheet Size	Scale	Sweco Ref	Revision
A3	1:500	65215652	P02

Drawing Number

65215652-SWE-XX-XX-D-TP-0001-03

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SHARSTON ROAD

BUS STOP

Shelter

Shelter

Tank

ø25000

35000

Unit 1

Unit 2

Unit 3

Unit 4

Unit 5

Unit 6

Unit 7

Unit 8

Unit 9

Sharston Industrial Area

16500

7300

7800

13200

15000

122

HAF

0 10 20 30 40 50 60 70 80 90 100

NOTES

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Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P01	17.06.2025	FIRST ISSUE	DM	IB	IB
P02	22.07.2025	UPDATED LAYOUT	JF	IB	IB

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Project Title

SHARSTON ROAD TRADE CITY

Drawing Title

SITE ACCESS AND INTERNAL SITE LAYOUT - SWEPT PATH ANALYSIS (SHEET 2)

Purpose Of Issue

PRELIMINARY

Status	Status Description
S0	INITIAL STATUS OR WIP

Drawn	Designed	Checked	Approved
JF	DM	IB	IB

Sheet Size	Scale	Sweco Ref	Revision
A3	1:500	65215652	P02

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65215652-SWE-XX-XX-D-TP-0001-04

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Appendix G – MCC Parking Standards

Land Use	Maximum number of car parking spaces		Minimum number of spaces required for:-		
	District Centres	Areas not within the City Centre or District Centres	Disabled people's parking as percentage of total (Citywide)		Cycles (Citywide)
			Up to 200 in total	Over 200 in total	
B1: Business					
Stand alone offices	1 space per 35sqm	1 space per 30sqm	Individual bays for each disabled employee plus 2 bays or 5% of total capacity whichever is greater	6 bays plus 2% of total capacity	1 space per 200sqm minimum of 2 spaces
Business Parks	1 space per 40sqm	1 space per 35sqm	Individual bays for each disabled employee plus 2 bays or 5% of total capacity whichever is greater	6 bays plus 2% of total capacity	1 space per 200sqm minimum of 2 spaces
B2: General Industry					
General Industry	1 space per 60sqm	1 space per 45sqm	Individual bays for each disabled employee plus 2	6 bays plus 2% of total capacity	1 space per 450sqm minimum of 2 spaces

Land Use	Maximum number of car parking spaces		Minimum number of spaces required for:-		
	District Centres	**Areas not within the City Centre or District Centres**	**Disabled people's parking as percentage of total (Citywide)**		**Cycles (Citywide)**
			Up to 200 in total	**Over 200 in total**	
			bays or 5% of total capacity whichever is greater		
B8 Storage and Distribution					
Storage and Distribution	1 space per 100sqm		Individual bays for each disabled employee plus 2 bays or 5% of total capacity whichever is greater	6 bays plus 2% of total capacity	1 space per 850sqm minimum of 2 spaces
C1: Hotels					
Hotels	1 space per bedroom including staff		3 bays or 6% of total capacity whichever is greater	4 bays plus 4% of total capacity	1 space per 10 guest rooms minimum of 2 spaces
D1: Non-Residential Institutions					

Appendix H – TRICS Outputs

Grontmij STREET NAME Edinburgh Licence No: 129301

Filtering Summary

Land Use	02/C	EMPLOYMENT/INDUSTRIAL UNIT
Selected Trip Rate Calculation Parameter Range	2500-25000 sqm GFA	
Actual Trip Rate Calculation Parameter Range	2950-17834 sqm GFA	
Date Range	Minimum: 01/01/14	Maximum: 08/11/23
Parking Spaces Range	All Surveys Included	
Days of the week selected	Monday	1
	Tuesday	1
	Wednesday	4
	Thursday	2
Main Location Types selected	Edge of Town	6
	Neighbourhood Centre (PPS6 Local Centre)	1
	Free Standing (PPS6 Out of Town)	1
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	3 - Selected
	Servicing vehicles Excluded	6 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	1,000 or Less	2
	5,001 to 10,000	3
	10,001 to 15,000	1
	15,001 to 20,000	1
	20,001 to 25,000	1
Population <5 Mile ranges selected	5,001 to 25,000	1
	25,001 to 50,000	1
	50,001 to 75,000	2
	75,001 to 100,000	1
	100,001 to 125,000	1
	125,001 to 250,000	2
Car Ownership <5 Mile ranges selected	0.6 to 1.0	1
	1.1 to 1.5	5
	1.6 to 2.0	2
PTAL Rating	No PTAL Present	8
Filter by Site Operations Breakdown	All Surveys Included	

Calculation Reference: AUDIT-129301-250303-0309

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	2 days
	HF	HERTFORDSHIRE	1 days
	WS	WEST SUSSEX	1 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	1 days
08	NORTH WEST		
	AC	CHESHIRE WEST & CHESTER	1 days
	EC	CHESHIRE EAST	1 days
09	NORTH		
	FU	WESTMORLAND & FURNESS	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	2950 to 17834 (units: sqm)
Range Selected by User:	2500 to 25000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/14 to 08/11/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	4 days
Thursday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1
Free Standing (PPS6 Out of Town)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	5
Development Zone	1
Village	1
Out of Town	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	3 days - Selected
Servicing vehicles Excluded	6 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	8 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:
All Surveys Included

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	2 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	2 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	5 days
1.6 to 2.0	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	7 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	8 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 AC-02-C-02 INDUSTRIAL MATERIALS CHESHIRE WEST & CHESTER
JUPITER DRIVE
CHESTER
CHESTER W. EMP. PARK
Edge of Town
Industrial Zone
Total Gross floor area: 8100 sqm
Survey date: WEDNESDAY 19/11/14 *Survey Type: MANUAL*

2 EC-02-C-01 OFFICE FURNITURE CHESHIRE EAST
BRUNEL ROAD
MACCLESFIELD
LYME GREEN BUS. PARK
Edge of Town
Development Zone
Total Gross floor area: 6658 sqm
Survey date: MONDAY 19/09/16 *Survey Type: MANUAL*

3 FU-02-C-01 DOMINO'S PIZZA WESTMORLAND & FURNESS
COWPER ROAD
PENRITH
GILWILLY IND. ESTATE
Edge of Town
Industrial Zone
Total Gross floor area: 2950 sqm
Survey date: TUESDAY 10/06/14 *Survey Type: MANUAL*

4 HC-02-C-01 ENGINEERING COMPANY HAMPSHIRE
JAYS CLOSE
BASINGSTOKE

Edge of Town
Industrial Zone
Total Gross floor area: 3000 sqm
Survey date: THURSDAY 16/06/16 *Survey Type: MANUAL*

5 HC-02-C-02 GIN DISTILLERY HAMPSHIRE
LONDON ROAD
LAVERSTOKE

Neighbourhood Centre (PPS6 Local Centre)
Village
Total Gross floor area: 8000 sqm
Survey date: WEDNESDAY 09/05/18 *Survey Type: MANUAL*

6 HF-02-C-02 FRESH PRODUCE HERTFORDSHIRE
COCKERELL CLOSE
STEVENAGE

Edge of Town
Industrial Zone
Total Gross floor area: 17834 sqm
Survey date: WEDNESDAY 08/11/23 *Survey Type: MANUAL*

7 WK-02-C-01 MACHINE ENGINEERING WARWICKSHIRE
CASTLE MOUND WAY
RUGBY

Edge of Town
Industrial Zone
Total Gross floor area: 9216 sqm
Survey date: WEDNESDAY 10/11/21 *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 WS-02-C-02 AVIATION COMPANY WEST SUSSEX
MAYDWELL AVENUE
NEAR HORSHAM
SLINFOLD
Free Standing (PPS6 Out of Town)
Out of Town
Total Gross floor area: 11375 sqm
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
EC-02-C-02	covid

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.013	3	10000	0.000	3	10000	0.013
05:30 - 06:00	3	10000	0.067	3	10000	0.007	3	10000	0.074
06:00 - 06:30	4	10344	0.053	4	10344	0.034	4	10344	0.087
06:30 - 07:00	4	10344	0.138	4	10344	0.077	4	10344	0.215
07:00 - 07:30	8	8392	0.137	8	8392	0.024	8	8392	0.161
07:30 - 08:00	8	8392	0.134	8	8392	0.021	8	8392	0.155
08:00 - 08:30	8	8392	0.322	8	8392	0.024	8	8392	0.346
08:30 - 09:00	8	8392	0.170	8	8392	0.016	8	8392	0.186
09:00 - 09:30	8	8392	0.089	8	8392	0.033	8	8392	0.122
09:30 - 10:00	8	8392	0.069	8	8392	0.039	8	8392	0.108
10:00 - 10:30	8	8392	0.071	8	8392	0.048	8	8392	0.119
10:30 - 11:00	8	8392	0.076	8	8392	0.040	8	8392	0.116
11:00 - 11:30	8	8392	0.042	8	8392	0.046	8	8392	0.088
11:30 - 12:00	8	8392	0.010	8	8392	0.021	8	8392	0.031
12:00 - 12:30	8	8392	0.039	8	8392	0.061	8	8392	0.100
12:30 - 13:00	8	8392	0.061	8	8392	0.074	8	8392	0.135
13:00 - 13:30	8	8392	0.073	8	8392	0.107	8	8392	0.180
13:30 - 14:00	8	8392	0.048	8	8392	0.064	8	8392	0.112
14:00 - 14:30	8	8392	0.039	8	8392	0.042	8	8392	0.081
14:30 - 15:00	8	8392	0.034	8	8392	0.049	8	8392	0.083
15:00 - 15:30	8	8392	0.022	8	8392	0.066	8	8392	0.088
15:30 - 16:00	8	8392	0.018	8	8392	0.051	8	8392	0.069
16:00 - 16:30	8	8392	0.024	8	8392	0.110	8	8392	0.134
16:30 - 17:00	8	8392	0.018	8	8392	0.121	8	8392	0.139
17:00 - 17:30	8	8392	0.016	8	8392	0.130	8	8392	0.146
17:30 - 18:00	8	8392	0.036	8	8392	0.270	8	8392	0.306
18:00 - 18:30	8	8392	0.048	8	8392	0.161	8	8392	0.209
18:30 - 19:00	8	8392	0.033	8	8392	0.066	8	8392	0.099
19:00 - 19:30	5	9875	0.018	5	9875	0.030	5	9875	0.048
19:30 - 20:00	5	9875	0.008	5	9875	0.032	5	9875	0.040
20:00 - 20:30	4	9500	0.005	4	9500	0.039	4	9500	0.044
20:30 - 21:00	4	9500	0.005	4	9500	0.016	4	9500	0.021
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.936			1.919			3.855

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:	2950 - 17834 (units: sqm)
Survey date date range:	01/01/14 - 08/11/23
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.000	3	10000	0.000	3	10000	0.000
06:00 - 06:30	4	10344	0.000	4	10344	0.000	4	10344	0.000
06:30 - 07:00	4	10344	0.000	4	10344	0.000	4	10344	0.000
07:00 - 07:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
07:30 - 08:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
08:00 - 08:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
08:30 - 09:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
09:00 - 09:30	8	8392	0.001	8	8392	0.001	8	8392	0.002
09:30 - 10:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
10:00 - 10:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:30 - 11:00	8	8392	0.003	8	8392	0.003	8	8392	0.006
11:00 - 11:30	8	8392	0.001	8	8392	0.001	8	8392	0.002
11:30 - 12:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
12:00 - 12:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:30 - 13:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
13:00 - 13:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
13:30 - 14:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
14:00 - 14:30	8	8392	0.001	8	8392	0.001	8	8392	0.002
14:30 - 15:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
15:00 - 15:30	8	8392	0.006	8	8392	0.006	8	8392	0.012
15:30 - 16:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
16:00 - 16:30	8	8392	0.001	8	8392	0.001	8	8392	0.002
16:30 - 17:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
17:00 - 17:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
17:30 - 18:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
18:00 - 18:30	8	8392	0.001	8	8392	0.001	8	8392	0.002
18:30 - 19:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
19:00 - 19:30	5	9875	0.000	5	9875	0.000	5	9875	0.000
19:30 - 20:00	5	9875	0.000	5	9875	0.000	5	9875	0.000
20:00 - 20:30	4	9500	0.000	4	9500	0.000	4	9500	0.000
20:30 - 21:00	4	9500	0.000	4	9500	0.000	4	9500	0.000
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.019			0.019			0.038

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.003	3	10000	0.000	3	10000	0.003
06:00 - 06:30	4	10344	0.005	4	10344	0.005	4	10344	0.010
06:30 - 07:00	4	10344	0.002	4	10344	0.000	4	10344	0.002
07:00 - 07:30	8	8392	0.006	8	8392	0.001	8	8392	0.007
07:30 - 08:00	8	8392	0.007	8	8392	0.007	8	8392	0.014
08:00 - 08:30	8	8392	0.010	8	8392	0.006	8	8392	0.016
08:30 - 09:00	8	8392	0.010	8	8392	0.004	8	8392	0.014
09:00 - 09:30	8	8392	0.010	8	8392	0.006	8	8392	0.016
09:30 - 10:00	8	8392	0.004	8	8392	0.006	8	8392	0.010
10:00 - 10:30	8	8392	0.015	8	8392	0.012	8	8392	0.027
10:30 - 11:00	8	8392	0.012	8	8392	0.009	8	8392	0.021
11:00 - 11:30	8	8392	0.012	8	8392	0.018	8	8392	0.030
11:30 - 12:00	8	8392	0.003	8	8392	0.006	8	8392	0.009
12:00 - 12:30	8	8392	0.004	8	8392	0.006	8	8392	0.010
12:30 - 13:00	8	8392	0.006	8	8392	0.004	8	8392	0.010
13:00 - 13:30	8	8392	0.012	8	8392	0.006	8	8392	0.018
13:30 - 14:00	8	8392	0.006	8	8392	0.007	8	8392	0.013
14:00 - 14:30	8	8392	0.003	8	8392	0.003	8	8392	0.006
14:30 - 15:00	8	8392	0.001	8	8392	0.003	8	8392	0.004
15:00 - 15:30	8	8392	0.003	8	8392	0.004	8	8392	0.007
15:30 - 16:00	8	8392	0.004	8	8392	0.003	8	8392	0.007
16:00 - 16:30	8	8392	0.004	8	8392	0.001	8	8392	0.005
16:30 - 17:00	8	8392	0.001	8	8392	0.007	8	8392	0.008
17:00 - 17:30	8	8392	0.003	8	8392	0.001	8	8392	0.004
17:30 - 18:00	8	8392	0.000	8	8392	0.001	8	8392	0.001
18:00 - 18:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
18:30 - 19:00	8	8392	0.000	8	8392	0.001	8	8392	0.001
19:00 - 19:30	5	9875	0.000	5	9875	0.006	5	9875	0.006
19:30 - 20:00	5	9875	0.002	5	9875	0.006	5	9875	0.008
20:00 - 20:30	4	9500	0.000	4	9500	0.005	4	9500	0.005
20:30 - 21:00	4	9500	0.000	4	9500	0.005	4	9500	0.005
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.148			0.149			0.297

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.000	3	10000	0.000	3	10000	0.000
06:00 - 06:30	4	10344	0.000	4	10344	0.000	4	10344	0.000
06:30 - 07:00	4	10344	0.002	4	10344	0.002	4	10344	0.004
07:00 - 07:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
07:30 - 08:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
08:00 - 08:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
08:30 - 09:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
09:00 - 09:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
09:30 - 10:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
10:00 - 10:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:30 - 11:00	8	8392	0.001	8	8392	0.000	8	8392	0.001
11:00 - 11:30	8	8392	0.000	8	8392	0.001	8	8392	0.001
11:30 - 12:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:00 - 12:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:30 - 13:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
13:00 - 13:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
13:30 - 14:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
14:00 - 14:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
14:30 - 15:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
15:00 - 15:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
15:30 - 16:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
16:00 - 16:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
16:30 - 17:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
17:00 - 17:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
17:30 - 18:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
18:00 - 18:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
18:30 - 19:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
19:00 - 19:30	5	9875	0.000	5	9875	0.000	5	9875	0.000
19:30 - 20:00	5	9875	0.000	5	9875	0.000	5	9875	0.000
20:00 - 20:30	4	9500	0.000	4	9500	0.000	4	9500	0.000
20:30 - 21:00	4	9500	0.000	4	9500	0.000	4	9500	0.000
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.005			0.005			0.010

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.000	3	10000	0.000	3	10000	0.000
06:00 - 06:30	4	10344	0.002	4	10344	0.002	4	10344	0.004
06:30 - 07:00	4	10344	0.015	4	10344	0.000	4	10344	0.015
07:00 - 07:30	8	8392	0.006	8	8392	0.001	8	8392	0.007
07:30 - 08:00	8	8392	0.009	8	8392	0.000	8	8392	0.009
08:00 - 08:30	8	8392	0.006	8	8392	0.000	8	8392	0.006
08:30 - 09:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
09:00 - 09:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
09:30 - 10:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:00 - 10:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:30 - 11:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
11:00 - 11:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
11:30 - 12:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:00 - 12:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:30 - 13:00	8	8392	0.000	8	8392	0.001	8	8392	0.001
13:00 - 13:30	8	8392	0.001	8	8392	0.003	8	8392	0.004
13:30 - 14:00	8	8392	0.001	8	8392	0.000	8	8392	0.001
14:00 - 14:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
14:30 - 15:00	8	8392	0.000	8	8392	0.004	8	8392	0.004
15:00 - 15:30	8	8392	0.000	8	8392	0.003	8	8392	0.003
15:30 - 16:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
16:00 - 16:30	8	8392	0.001	8	8392	0.004	8	8392	0.005
16:30 - 17:00	8	8392	0.000	8	8392	0.007	8	8392	0.007
17:00 - 17:30	8	8392	0.000	8	8392	0.010	8	8392	0.010
17:30 - 18:00	8	8392	0.000	8	8392	0.004	8	8392	0.004
18:00 - 18:30	8	8392	0.001	8	8392	0.003	8	8392	0.004
18:30 - 19:00	8	8392	0.009	8	8392	0.003	8	8392	0.012
19:00 - 19:30	5	9875	0.000	5	9875	0.004	5	9875	0.004
19:30 - 20:00	5	9875	0.000	5	9875	0.000	5	9875	0.000
20:00 - 20:30	4	9500	0.000	4	9500	0.000	4	9500	0.000
20:30 - 21:00	4	9500	0.000	4	9500	0.000	4	9500	0.000
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.051			0.049			0.100

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.013	3	10000	0.000	3	10000	0.013
05:30 - 06:00	3	10000	0.057	3	10000	0.007	3	10000	0.064
06:00 - 06:30	4	10344	0.046	4	10344	0.027	4	10344	0.073
06:30 - 07:00	4	10344	0.126	4	10344	0.070	4	10344	0.196
07:00 - 07:30	8	8392	0.119	8	8392	0.018	8	8392	0.137
07:30 - 08:00	8	8392	0.122	8	8392	0.010	8	8392	0.132
08:00 - 08:30	8	8392	0.301	8	8392	0.013	8	8392	0.314
08:30 - 09:00	8	8392	0.147	8	8392	0.006	8	8392	0.153
09:00 - 09:30	8	8392	0.058	8	8392	0.015	8	8392	0.073
09:30 - 10:00	8	8392	0.051	8	8392	0.019	8	8392	0.070
10:00 - 10:30	8	8392	0.039	8	8392	0.016	8	8392	0.055
10:30 - 11:00	8	8392	0.037	8	8392	0.012	8	8392	0.049
11:00 - 11:30	8	8392	0.021	8	8392	0.018	8	8392	0.039
11:30 - 12:00	8	8392	0.004	8	8392	0.010	8	8392	0.014
12:00 - 12:30	8	8392	0.021	8	8392	0.048	8	8392	0.069
12:30 - 13:00	8	8392	0.039	8	8392	0.054	8	8392	0.093
13:00 - 13:30	8	8392	0.049	8	8392	0.082	8	8392	0.131
13:30 - 14:00	8	8392	0.031	8	8392	0.043	8	8392	0.074
14:00 - 14:30	8	8392	0.025	8	8392	0.028	8	8392	0.053
14:30 - 15:00	8	8392	0.021	8	8392	0.031	8	8392	0.052
15:00 - 15:30	8	8392	0.006	8	8392	0.048	8	8392	0.054
15:30 - 16:00	8	8392	0.006	8	8392	0.039	8	8392	0.045
16:00 - 16:30	8	8392	0.010	8	8392	0.092	8	8392	0.102
16:30 - 17:00	8	8392	0.006	8	8392	0.104	8	8392	0.110
17:00 - 17:30	8	8392	0.007	8	8392	0.112	8	8392	0.119
17:30 - 18:00	8	8392	0.033	8	8392	0.255	8	8392	0.288
18:00 - 18:30	8	8392	0.040	8	8392	0.156	8	8392	0.196
18:30 - 19:00	8	8392	0.030	8	8392	0.057	8	8392	0.087
19:00 - 19:30	5	9875	0.016	5	9875	0.024	5	9875	0.040
19:30 - 20:00	5	9875	0.006	5	9875	0.024	5	9875	0.030
20:00 - 20:30	4	9500	0.003	4	9500	0.032	4	9500	0.035
20:30 - 21:00	4	9500	0.005	4	9500	0.008	4	9500	0.013
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.495			1.478			2.973

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.003	3	10000	0.000	3	10000	0.003
06:00 - 06:30	4	10344	0.002	4	10344	0.002	4	10344	0.004
06:30 - 07:00	4	10344	0.007	4	10344	0.005	4	10344	0.012
07:00 - 07:30	8	8392	0.012	8	8392	0.004	8	8392	0.016
07:30 - 08:00	8	8392	0.003	8	8392	0.003	8	8392	0.006
08:00 - 08:30	8	8392	0.009	8	8392	0.004	8	8392	0.013
08:30 - 09:00	8	8392	0.009	8	8392	0.006	8	8392	0.015
09:00 - 09:30	8	8392	0.018	8	8392	0.010	8	8392	0.028
09:30 - 10:00	8	8392	0.010	8	8392	0.010	8	8392	0.020
10:00 - 10:30	8	8392	0.018	8	8392	0.019	8	8392	0.037
10:30 - 11:00	8	8392	0.022	8	8392	0.016	8	8392	0.038
11:00 - 11:30	8	8392	0.007	8	8392	0.007	8	8392	0.014
11:30 - 12:00	8	8392	0.001	8	8392	0.003	8	8392	0.004
12:00 - 12:30	8	8392	0.013	8	8392	0.007	8	8392	0.020
12:30 - 13:00	8	8392	0.013	8	8392	0.013	8	8392	0.026
13:00 - 13:30	8	8392	0.012	8	8392	0.018	8	8392	0.030
13:30 - 14:00	8	8392	0.009	8	8392	0.013	8	8392	0.022
14:00 - 14:30	8	8392	0.009	8	8392	0.009	8	8392	0.018
14:30 - 15:00	8	8392	0.012	8	8392	0.015	8	8392	0.027
15:00 - 15:30	8	8392	0.007	8	8392	0.004	8	8392	0.011
15:30 - 16:00	8	8392	0.006	8	8392	0.009	8	8392	0.015
16:00 - 16:30	8	8392	0.007	8	8392	0.013	8	8392	0.020
16:30 - 17:00	8	8392	0.009	8	8392	0.007	8	8392	0.016
17:00 - 17:30	8	8392	0.006	8	8392	0.012	8	8392	0.018
17:30 - 18:00	8	8392	0.001	8	8392	0.006	8	8392	0.007
18:00 - 18:30	8	8392	0.006	8	8392	0.003	8	8392	0.009
18:30 - 19:00	8	8392	0.001	8	8392	0.004	8	8392	0.005
19:00 - 19:30	5	9875	0.002	5	9875	0.000	5	9875	0.002
19:30 - 20:00	5	9875	0.000	5	9875	0.000	5	9875	0.000
20:00 - 20:30	4	9500	0.003	4	9500	0.003	4	9500	0.006
20:30 - 21:00	4	9500	0.000	4	9500	0.003	4	9500	0.003
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.237			0.228			0.465

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30	3	10000	0.000	3	10000	0.000	3	10000	0.000
05:30 - 06:00	3	10000	0.003	3	10000	0.000	3	10000	0.003
06:00 - 06:30	4	10344	0.000	4	10344	0.000	4	10344	0.000
06:30 - 07:00	4	10344	0.000	4	10344	0.000	4	10344	0.000
07:00 - 07:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
07:30 - 08:00	8	8392	0.001	8	8392	0.000	8	8392	0.001
08:00 - 08:30	8	8392	0.001	8	8392	0.000	8	8392	0.001
08:30 - 09:00	8	8392	0.003	8	8392	0.000	8	8392	0.003
09:00 - 09:30	8	8392	0.001	8	8392	0.000	8	8392	0.001
09:30 - 10:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:00 - 10:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
10:30 - 11:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
11:00 - 11:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
11:30 - 12:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:00 - 12:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
12:30 - 13:00	8	8392	0.001	8	8392	0.001	8	8392	0.002
13:00 - 13:30	8	8392	0.000	8	8392	0.001	8	8392	0.001
13:30 - 14:00	8	8392	0.001	8	8392	0.000	8	8392	0.001
14:00 - 14:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
14:30 - 15:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
15:00 - 15:30	8	8392	0.000	8	8392	0.003	8	8392	0.003
15:30 - 16:00	8	8392	0.001	8	8392	0.000	8	8392	0.001
16:00 - 16:30	8	8392	0.000	8	8392	0.001	8	8392	0.001
16:30 - 17:00	8	8392	0.000	8	8392	0.000	8	8392	0.000
17:00 - 17:30	8	8392	0.000	8	8392	0.004	8	8392	0.004
17:30 - 18:00	8	8392	0.000	8	8392	0.006	8	8392	0.006
18:00 - 18:30	8	8392	0.000	8	8392	0.000	8	8392	0.000
18:30 - 19:00	8	8392	0.000	8	8392	0.001	8	8392	0.001
19:00 - 19:30	5	9875	0.000	5	9875	0.000	5	9875	0.000
19:30 - 20:00	5	9875	0.000	5	9875	0.002	5	9875	0.002
20:00 - 20:30	4	9500	0.000	4	9500	0.000	4	9500	0.000
20:30 - 21:00	4	9500	0.000	4	9500	0.000	4	9500	0.000
21:00 - 21:30	1	8000	0.000	1	8000	0.000	1	8000	0.000
21:30 - 22:00	1	8000	0.000	1	8000	0.000	1	8000	0.000
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.012			0.019			0.031

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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